AD-A265 430

②

UNITED STATES ARMY
HEALTH CARE STUDIES AND
CLINICAL INVESTIGATION ACTIVITY

PROCEEDINGS

EIGHTH USERS' STRESS WORKSHOP

September 24 - 27, 1991

A. David Mangelsdorff, Ph.D., M.P.H.

Consultation Report #92-003

September 1992

DTIC
ELECTE
JUN 02 1993
S E D

93 01 01 1

UNITED STATES ARMY
HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

93-12281

* * * * * * * * * * * * *

Regular users of services of the Defense Technical Information Center
(per DOD Instruction 5200.21) may purchase copies directly from the
following:

        Defense Technical Information Center (DTIC)
        ATTN: DTIC-DDR
        Cameron Station
        Alexandria, VA 22304-6145

        Telephones: AUTOVON (108) 284-7633, 4, or 5
                     COMMERCIAL (202) 274-7633, 4, or 5

All other requests for these reports will be directed to the following:

        U.S. Department of Commerce
        National Technical Information Services (NTIS)
        5285 Port Royal Road
        Springfield, VA 22161

        Telephone: COMMERCIAL (703) 487-4600

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

a. REP SECURITY CLASSIFICATION Unc sified	1b RESTRICTIVE MARKINGS
2a. SE Y CLASSIFICATION AUTHORITY	3 DISTRIBUTION/AVAILABILITY OF REPORT
2b. DE SSIFICATION/DOWNGRADING SCHEDULE	Approved for public release; Distribution unlimited

4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5 MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION US Army Health Care Studies & Clinical Investigation Acty	6b. OFFICE SYMBOL (If applicable) HSHN-T	7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code)	7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS			
	PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)

Proceedings Eighth Users' Stress Workshop (U)

12. PERSONAL AUTHOR(S)
A. David Mangelsdorff

13a. TYPE OF REPORT Final	13b. TIME COVERED FROM Sep 91 TO Sep 91	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT

16. SUPPLEMENTARY NOTATION

17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
FIELD	GROUP	SUB-GROUP	Stress; stress disorders, post-traumatic stress psychological training.

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The proceedings document the presentations at a workshop conducted in September 1991 on the training programs designed for managing psychological trauma and stress.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL A. David Mangelsdorff, Ph.D., M.P.H.	22b TELEPHONE (Include Area Code) (210) 221-0671	22c. OFFICE SYMBOL HSHN-T

DD Form 1473, JUN 86   Previous editions are obsolete.   SECURITY CLASSIFICATION OF THIS PAGE

Unclassified

PREFACE

The eighth in a series of stress workshop/conferences held in San Antonio, Texas, the 1991 effort was as successful as previous ones. I would like to thank the following organizations for their interest and concern in support this program: the NATO Research Study Group on Psychological Support, the United States Army Health Care Studies and Clinical Investigation Activity, the University of Texas Health Science Center at San Antonio, and the San Antonio Police Department in general (and Dr. Mike McMains in particular) for their contributions.

It is hoped the experience and information will be profitable to all users.

A. David Mangelsdorff, Ph.D., M.P.H.

Accesion For		
NTIS CRA&I		⊠
DTIC TAB		☐
Unannounced		☐
Justification		
By		
Distribution /		
Availability Codes		
Dist	Avail and / or Special	
A-1		

THIS QUALITY INSPECTED 2

TABLE OF CONTENTS
EIGHTH USERS' STRESS WORKSHOP

SELF-RELIANCE FOR STRESS AND COMBAT

James Campbell Quick
Janice R. Joplin
University of Texas at Arlington
Arlington, Texas

Debra L. Nelson
Oklahoma State University
Stillwater, Oklahoma

Jonathan D. Quick
Management Sciences for Health
Boston, Massachusetts

A wide range of stressful, problematic, and potentially dangerous situations (e.g., battlefield combat, corporate warfare, and newcomer socialization in organizations) elicit the experience of threat, anxiety, and uncertainty in a person (Hobfoll et al., 1991; Nelson, Quick & Quick, 1989; Nelson, Quick & Joplin, 1991). We review three behavioral strategies for achieving a sense of felt security in such stressful, anxious, and threatening situations. Next we present preliminary validity and reliability results for the Self-Reliance Inventory. Finally, we present results from two military studies, one a study of basic military trainees, and the other a study of one officer candidate cohort.

THEORETICAL FRAMEWORK

Attachment theory was originally framed for understanding normal human behavior exhibited by infants and children in threatening situations (Bowlby, 1982). Bowlby (1989) believed the parents' role in normal human development is to serve as a secure base for the child in a fashion similar to the way an operational base affords security for a military strike or expeditionary force. Unfortunately, neither all children nor all strike or expeditionary military forces have such secure bases. Three distinct patterns of attachment have been identified and new research suggests that these patterns extend into behavioral strategies during adulthood, in professional as well as personal relationships (Hazen & Shaver, 1990; Kobak & Shaver, 1987; Quick, Nelson & Quick, 1990). The three strategies are self-reliance, counterdependence, and overdependence (Quick, Nelson & Quick, 1991; Quick, Nelson, Joplin & Quick, in press).

Self-Reliance and Secure Bases

Self-reliance is a healthy, secure behavioral strategy which may seem paradoxical because a person appears independent while maintaining a host of supportive attachments (i.e., the person forms a secure base of operation). Self-reliant people respond to stressful, threatening situations by reaching out to others appropriately during threat or danger. Self-reliance is characterized as a flexible, responsive strategy of forming and maintaining multiple, diverse relationships. Self-reliant people are confident, enthusiastic, and persistent in facing challenges. Self-reliance is incorrectly confused with independence.

Counterdependence and Separation

Counterdependence is an unhealthy, insecure behavioral strategy which may develop in response to intense or frequent experiences of separation anxiety. Counterdependent people respond to stressful and threatening situations by drawing into themselves in an attempt to exhibit strength and power. Counterdependence may be characterized as a rigid, dismissing strategy of denying the

1

need for other people in difficult and stressful times. Counterdependent people exhibit a fearless, aggressive, and actively powerful response to challenges. Counterdependence leads to separation in relationships with other people.

Overdependence and Desperation
Overdependence is an unhealthy, insecure behavioral strategy which is an alternative to counter_dependence as a response to intense or frequent experiences of separation anxiety. Overdependent people respond to stressful and threatening situations by clinging to other people in any way possible. Overdependence may be characterized as a desperate, preoccupied strategy of attempting to achieve a sense of felt security through relationship. Overdependent people exhibit an active but disorganized and anxious response to challenges. Overdependence prevents a person from being able to organize and maintain healthy relationships.

The Dominant Strategy
While people exhibit self-reliance, counterdependence, and overdependence at different times or in different relationships, each person will have one dominant behavioral strategy which is used in time of threat and stress. Self-reporting measures of the three behavioral strategies have not existed previously.

VALIDITY AND RELIABILITY

To assess the validity and reliability of the Self-Reliance Inventory, a sample of 310 individuals (45% female; 55% male) were asked to complete a questionnaire. The questionnaire contained the SRI along with five measures of health symptoms. Those symptoms included anxiety and insomnia, social dysfunction, and somatic symptoms (Goldberg & Hillier, 1979), physiological symptoms, and psychological symptoms (Derogatis, 1977).

Factor Structure
Principal components analysis was used to examine the factor structure of the Self-Reliance Inventory. From this analysis, three factors emerged. The first factor, labeled Counterdependence, was composed of ten items. The second factor, labeled Overdependence, was made up of six items. A third factor consisted of four items and was labeled Autonomy at Work. Of the four remaining items, two items loaded on two separate factors, and two items did not significantly load on any of the three factors. The results of the factor analysis thus support attachment theory in terms of counterdependence and overdependence. The third factor, representing the capacity for working autonomously and alone, warrants further investigation.

Internal Consistency
Cronbach's coefficient alpha (Cronbach, 1951) was used to assess the internal consistency reliabilities for all variables in the study. The results were: counterdependence (.69), overdependence (.58), autonomy at work (.51) (N = 310). Given Nunnally's (1979) recommendation that alphas of .50 are marginally acceptable for exploratory or scale development work, the three subscales of the Self-Reliance Inventory were deemed adequate in terms of preliminary reliability. Cronbach's alpha was also calculated for the health measures. The results were: anxiety and insomnia (.77), social dysfunction (.83), somatic symptoms (.77), psychological symptoms (.75), and physiological

2

symptoms (.87) (N = 225). Thus the internal consistency estimates for the health measures were highly acceptable.

Test-Retest

A subsample of 44 subjects completed the SRI a second time three weeks after the initial administration. Pearson product-moment correlations were used to examine the test-retest reliability of each subscale of the SRI. Results were .80 for counterdependence, .67 for overdependence and .73 for autonomous behavior at work. The SRI appears to possess acceptable test-retest reliability.

Relationship with Health Symptom

Pearson product-moment correlations were also used to examine the relationship between the self-reliance subscales and the five health symptoms measures. Results indicated a significant positive correlation between each health symptom measure and counterdependence. In contrast, overdependence was not significantly related to any health measure. Autonomy at work was positively related to anxiety and insomnia.

In summary, preliminary research indicates that the Self-Reliance Inventory possesses a factor structure consistent with the attachment theory upon which it is based. Further, it demonstrates adequate internal consistence and test-retest reliability. Its validity is supported by the relationship demonstrated between counterdependence, a dysfunctional attachment strategy, and five health symptoms. While overdependence was not found to be associated with health symptoms, it may be associated with other dysfunctions, such as the inability to make timely decisions. The third factor, autonomy at work, confronts the paradox that self-reliant individuals may engage in autonomous appearing behavior; yet it is their support networks that enable them to do so.

MILITARY TRAINEE STUDIES

The question might be asked, why study military groups in "entry" training phases? These groups were of interest to us for several reasons: (1) they are newcomers being socialized into an organization; (2) they are encountering an intensive training period; (3) they have very limited access to their normal support networks; and (4) the "reforming" of a support network during the training period may be crucial to their successful completion of training.

Basic Military Training

A cross-sectional study was done of individuals who were in their initial enlisted military training to compare a "functionally normal" sample (i.e., those who were near the completion of their training) with a sample that had received clinical diagnoses or were exhibiting problems that would delay or preclude their completion of the initial training phase. In the "normal" group (n = 96) and in the "problem" group (n=62), the measures assessed were: counterdependence, overdependence and autonomy at work with the Self-Reliance Inventory; psychological, physiological, somatic, anxiety & insomnia and social dysfunction health symptoms; a 10-item burnout scale; Rosenberg's self-esteem scale; and Rempel & Holmes trust in others scale, modified. Additionally, each individual was asked to report whether they were experiencing physiological, psychological, emotional or behavioral problems in the training program.

3

Two comparisons of the groups were made on each of the measures. The first comparison was done "as the system" views them (i.e., a "normal" group and a "problem" group). In the second comparison, those who were in the "normal" group, yet indicated they were experiencing problems were not included in the comparison; thus, a comparison "as they view themselves" was done (normal n=80; problem n=62). In both comparisons, the problem group had significantly higher (p < .0001) scores on all health symptom measures and the burnout measure. Self-esteem was significantly lower in the "problem" group in both comparisons (p < .0015). Overdependence was also significantly higher in the "problem" group In both comparisons (p < .04). Perhaps most interesting, counterdependence was not significantly different between higher (p < .02) counterdependence scores within the "self-perception" view. This may indicate some systematic variance in training standards and problem identification.

Officer Candidates

A longitudinal study was conducted (initial n=67; end-of-training n=63) over the 14-week training period of a cohort of officer candidates. The measures were conducted during the first, fourth, and fourteenth weeks of training. Over this time period the cohort (based on mean scores) became significantly more counterdependent (p < .03) and significantly (p < .0001) healthier on each of the five health measures, with the most significant increases in health occurring during the first four weeks of training. A primary focus of this longitudinal study was to assess the relationship of counterdependence and overdependence to the five health measures. These relationships were analyzed through the construction of cross-lag panel correlations. The circumstantial evidence to date suggests the tentative inference that counterdependence drives health symptoms, particularly over the longer term. That is, with the exception of social dysfunction, counterdependence became more significantly related to health symptoms over the longer time periods.

Overdependence, on the other hand, appears to be an "on-line" or short-term coping mechanism that is significantly related to current or short-term symptoms. This may in part be substantiated by the basic training sample where those in the "problem" group (i.e., those with clinical diagnoses) had significantly higher overdependent scores that those in the "normal" group. When individuals are experiencing health problems, they frequently are required to rely upon others, or in some situations literally put their life in the hands of others. Thus, overdependence may be an effective strategy, and necessary for survival in some circumstances.

Finally, comparisons of mean overdependent and counterdependent scores were made between the military samples and those in the initial study of students and managers. The overdependent scores were only slightly different, with the primary difference being a lower score for the officer cohort at week fourteen. While the enlisted military samples were more counterdependent that the student/manager samples, the officer candidates were less counterdependent. This leads us to the question of whether the military attracts more counterdependent individuals within similar age and education categories.

Questions still to address are: What are the implications of these results for team-building in military and other organization settings? And, are higher counterdependence scores beneficial in combat situations.

4

REFERENCES

Bowlby, J. (1988). A secure base. New York: Basic Books.

Bowlby, J. (1982). Attachment and loss. Vol. I: Attachment (Ref. Ed.). New York: Basic Books.

Cronbach, L. (1951). Coefficient Alpha and the internal structure of tests. Psychometrika, XVI, 297-334.

Derogatis, L. (1977). SCL-90-R Administration. Baltimore: Clinical Psychometric Research.

Goldberg, D.P. & Hillier, V.F. (1979). A scaled version of the General Health Questionnaire. Psychological Medicine, 9, 139-145

Hazan, C. & Shaver, P. (1990). Love and work: An attachment-theoretical perspective. Journal of Personality and Social Psychology, 59, 270-280.

Hobfoll, S.E., Spielberger, C.D., Breznitz, S., Figley, C., Folkman, S., Lepper-Green, B., Meichenbaum, D., Milgram, N.A., Sandler, I., Sarason, I., & van der Kolk, B. (1991). War-related stress. American Psychologist, 46, 848-855.

Kobak, R. & Shaver, P. (1987). Strategies for maintaining felt security: A theoretical analysis of continuity and change in styles of social adaptation. Prepared for the Conference in honor of John Bowlby's 80th birthday. Bayswater, London.

Nelson, D.L., Quick, J.C., & Joplin, J.R. (1991). Psychological contracting and newcomer socialization: An attachment theory foundation. In P. Perrewe (Ed.), Handbook on job stress (pp. 55-72). Corte Madera, CA: Select Press.

Nelson, D.L., Quick, J.C., & Quick, J.D. (1989). Corporate warfare: Preventing combat stress and battle fatigue. Organizational Dynamics, 18, 65-79.

Nunnally, J.C. (1979). Psychometric theory. New York: McGraw-Hill.

Quick, J.C., Nelson, D.L., & Quick, J.D. (1990). Stress and challenge at the top: The paradox of the successful executive. Chichester: John Wiley.

Quick, J.C., Nelson, D.L., & Quick, J.D. (1991). The self-reliance inventory. In J. W. Pfeiffer (Ed.), The 1991 annual: Developing human resources. San Diego: University Associates.

Quick, J.C., Nelson, D.L., Joplin, J.R., & Quick, J.D. (in press). Behavioral responses to anxiety: Self-reliance, counterdependence and overdependence. Anxiety Research, an International Journal.

SCREENING MILITARY INSTRUCTORS USING COMBINED CLINICAL, COPING JOB FIT APPROACH

Edwin L. Gerwell, Ph.D.
Wilford Hall Medical Center
Lackland AFB, Texas

The drill instructor or military training instructor has traditionally been portrayed as a highly aggressive, self-assured individual who delivers a calculated form of pressure and discipline to the young military recruit. Much less attention has been focused on the selection for, and subsequent adaptive demands of, the military training instructor.

In the U.S. Air Force, the military training instructor (MTI) duty is a voluntary tour of approximately 3 years. Volunteers are recruited from all military specialties and are required to undergo a medical and fitness screening at their local base. Minimal requirements are for a general medical officer to review the individual and medical records for any physical, personality, or emotional disqualifiers. The applicant, if accepted, is sent to her/his duty site at Lackland AFB to attend a preliminary course with a focus on military training techniques and administration. The candidate is then placed in a supervised status. Successful completion of this phase indicates that the individual is certified as an instructor. Course preparation does not focus on the psychological challenges or coping demands of the job as suggested by Novaco (1991, 1983). If successful in this supervised status, the MTI is certified to train independently. Strategies for dealing with training problems, which may range from a slow learner to an individual who has hidden his/her psychiatric record and is now experiencing psychotic symptoms, is based on modeling the training supervisor. During this period of time, the new instructor becomes acutely aware of the additional job demands which include long hours, public speaking and assertiveness demands, exposure to the environment, impeccable dress standards, and significant time demands generated by administrative and extra duties. They also experience the unique stressors generated by the demand to mediate controlled aggression which is inherent in the training environment (Haney, 1973). The sum total of this process is that the new MTI becomes aware of a tremendous role demand with which he/she must cope for the remaining years.

The negative impact of the stressors of MTI duty are reflected in a pattern consistent with the theories of short and long term stress. An attrition rate of approximately 8% is consistent for this group with the majority of losses occurring in the first year. Long term effects are more diffuse, but gradual rises in blood pressure, radical alteration of military career goals, and marital and family discord have been observed and attributed to the long term effects of MTI duty. The short term stress related impact has long been recognized as reflected in the regulation driven requirement for periodic mental health screening. Attrition rates have varied from as high as 20% to a low of 4% annually over the last 5 years. The program to address the stress issue has historically focused on identification and, we would hope, early intervention for performance related issues. The evaluation protocol traditionally consisted of the administration of a personality assessment instrument such as the MMPI or MCMI and clinical interview. The obvious goal was the identification of psychopathology. This process was repeated approximately yearly throughout the assignment cycle. Findings after the first evaluation were generally negative and the process was time consuming. Little

attention was paid to the chronic impact of MTI duty or to prevention of long term stress related issues. This latter fact led to the development of a more comprehensive approach for dealing with the negative stress implications of MTI duty in the Air Force.

In 1989, a two tiered MTI assessment program was instituted. The initial contact with MTIs by the mental health team consisted of a post MTI school graduation briefing which introduced some of the concepts of stress and the role of the Behavioral Analysis Service (BAS) in supporting the instructors (Long, 1991). In the first year the MTI is administered the traditional personality assessment and is scheduled for a clinical interview. The findings of this evaluation are candidly discussed with the MTI and may result in referral for services or possible curtailment of assignment. Subsequently, the instructors are assessed for coping resources utilizing the Coping Resources for Stress (CRIS) (Curlette, et. al., 1989) and scheduled for an interview which includes both clinical assessment and discussion of the indicators derived from the CRIS. The CRIS is a 280 item self report inventory which focuses on perceived resources of the respondent. It yields a global coping resources score along with 12 primary scales: self-disclosure, self-directedness, confidence, acceptance, social support, financial freedom, physical health, physical fitness, stress monitoring, tension control, structuring, and problem solving. There are also three composite scores: cognitive restructuring, functional beliefs, and social ease. Sixteen wellness inhibiting items are indicated along with validity indicators. The test is computer scored and produces an interpretative report in layman's terms. The report is frequently provided to the respondent and used as a treatment planning document. A number of the scales can be used as a basis for identifying specific interventions such as anger control or stress management once they are substantiated by patient history. Significant findings are addressed with the MTI. Based on willingness to participate in intervention the MTI is entered into services provided by a large medical center complex and base support. Very short term individual intervention may be provided by the BAS clinical staff. The range of services include stress management classes, smoke enders programs, bio-feedback training, marital and family counseling, financial counseling drug and alcohol counseling, general medical services and chaplain services. Follow-up is coordinated by BAS clinical staff. The majority of these services are preventive in nature and are non-stigmatizing in career terms. In addition to the programmed services detailed previously both the MTI and the work place have the option of ad hoc referral for services to deal with emergent issues.

The use of a comprehensive and rationally based program of work site stress coping assessment anchored in a multiservice health and support environment offers substantial benefits toward prevention of both short term and long term personnel losses. The current program represents an early model for effective utilization of work site resources in conserving valuable personnel resources in both military and civilian industrial settings. Future anticipated additions to this program could include significant health risk indicators such as lipid level measures and blood pressure monitoring. Data collection is in progress on this population with anticipated harvest in the coming years.

7

REFERENCES

Curlette, W.L., Aycock, D.W., Matheny, K.B., Pugh, J.L., Taylor, H.F. (1989). <u>Coping resources inventory for stress manual</u>. Atlanta, GA: Health Prisms Inc.

Haney, C., Banks, C., Zimbardo, P. (1973). Interpersonal dynamics in a simulated prison international. <u>Journal of Criminology and Penology, 1</u>, 69-97.

Long, B.C. (1991, August). <u>Coping, optimism and work stress: Predictors of psychosomatic health and job satisfaction of male managers</u>. Poster presentation at American Psychological Association, San Francisco, CA.

Novaco, R.W. (1992). Competence skill training for training instructors. <u>Proceedings Eighth Users' Stress Workshop, San Antonio, IX, 1991</u>.

Novaco, R.W., Cook, T.M. & Sarason, I.G. (1983). Military recruit training: An arena for stress-coping skill. In D. Meichenbaum & M. Jarenko (Eds.), <u>Stress Reduction and Prevention</u> (pp 377-418). New York: Plenum Press.

8

A STRESS COPING SKILLS INTERVENTION FOR
MARINE CORPS DRILL INSTRUCTORS

Raymond W. Novaco, Ph.D.
University of California, Irvine

Occupational stress has been a burgeoning field in the past decade, and among the job factors that have been linked with stress are heavy task demands, excessive competition, long working hours, and conflicts with supervisors. These stress-related conditions are certainly elements of the jobs of military recruit trainers, and have been stereotypical characteristics of the occupational role of the Marine Corps Drill Instructor. Indeed, a longitudinal study of drill instructor cohorts at San Diego Marine Corps Recruiting Depot (MCRD) found that drill field duty was associated with significant increases in self-reported stress, coronary-prone behavior, heart rate, and blood pressure. Importantly, self-reported stress, impatience, and anger were inversely related to job performance evaluations (Novaco, Sarason, Robinson, & Cunningham, 1982).

In view of these findings for drill instructors, and given our prior research with Marine Corps recruits (Novaco, Sarason, Cook, Robinson, & Cunningham, 1979) which led to a successful intervention project (Novaco, Sarason, & Cook, 1983), a stress coping skills program was developed for use at both the San Diego and Parris Island Drill Instructor (DI) Schools and was evaluated for its effectiveness. Our assumption was that a drill instructor's many recruit training responsibilities can strain his adaptive capacities, thereby causing undesirable consequences for his own health and adjustment, as well as interference with optimum job performance. The intervention sought to augment the drill instructors' stress coping skills in a program implemented by the leadership instructors at DI School and by series chief drill instructors in follow-up seminars during the tour of duty.

The intervention program largely consisted of videotaped materials and supplementary manuals. Because it was not possible to have a non-intervention control group, the program was evaluated partly through a comparison group design involving data from prior stress study cohorts and partly through various evaluative ratings by intervention study participants. A within project analysis was also conducted whereby sample cohorts were partitioned into "high comprehension" and "low comprehension" groups (based on post-exposure testing of videotape module content), and then perceived stress outcome measures were examined for between group differences. These latter analyses controlled for reading level and general aptitude test scores available through DI School archives.

INTERVENTION PROGRAM

The coping skills intervention had several main components: (1) six videotaped modules on key themes concerning stress and coping; (2) eight vignettes on recurrent problem situations and how to handle them; and (3) follow-up seminars during drill field duty assignment. The third component was added after project commencement, in response to initiatives by the Recruit Training Regiment commanders. The three components are described below.

9

Stress Coping Skills Modules

In conjunction with TAVSC, San Diego and Parris Island, and with TAVSC, Quantico, six modules of approximately 15 minutes each were produced. The modules were (a) "Demanding Excellence: Stress on the Drill Field and How to Cope with It," (b) "Coping with Frustration in Supervising Physical Training," (c) "Anger and Impatience," (d) Coping with Evaluation Anxiety, (e) "Personal Relationships," and (f) "Recruit Evaluation." The modules were developed from our previously conducted research findings, existing knowledge of stress interventions, extensive interviews with experienced drill instructors, DI School staff, and battalion and regimental commanders. Draft productions of each videotape were sequentially reviewed by our project team, by local commanders, and by Headquarters as they were produced.

The modules portray the stressful aspects of the drill field and illustrate the use of basic coping skills, such as being task-oriented, self-monitoring, setting realistic expectations, thinking constructively, and using supportive social relationships. The coping skills were presented graphically and illustrated by scenes of drill instructors performing their jobs. Both live action recordings and role-played performances were utilized, along with an on-camera narrator (a First Sergeant).

Problem Situation Vignettes

The eight vignettes were composites of role-played enactments portraying recurrent problem situations. Five involved "problem recruit" situations: refusal to train, disrespect, mentally slowness, emotional distress, and documentation. Two vignettes involved work situations with peers and supervisors, and another concerned personal relationships. The vignettes presented the problem situation, two alternative responses by effective drill instructor models, and then a collage of undesirable responses. Each of these segments was followed by an opportunity for analysis and discussion. Instructional messages were given by a narrator, graphics were used to illustrate key points, and each vignette concluded with an evaluative summary (e.g., for the problem recruit situations, the ingredients of proper documentation were provided).

Follow-up Seminars

This component of the program was activated in response to the request of the regimental commanders at both MCRDs for a type of "refresher course." The seminars were implemented during the period of pick-up briefings at both depots with some variation. At San Diego, the seminars were conducted by series chief drill instructors, while at Parris Island the leaders were company first sergeants. Five main topics were addressed: (1) "Stress and Recruit Behavior," (2) "Disruptive Emotions," (3) "Recruit Evaluation and Documentation," (4) "Work Relationships," and (5) "Personal Relationships." The seminars were guided by manuals for the use of the videotaped modules and vignettes, but two conditions made the seminar component of the intervention less than optimal: (1) The videotape equipment was often not available, and (2) Personnel turnover was a major impediment to program continuity. Neither of these problems occurred in DI School where the main intervention was conducted.

Instructional Manuals and Student Handbooks

The stress coping curriculum was ultimately shaped by the particular leaders implementing the program. However, the videotaped materials for both DI School and the Follow-up Seminars were supplemented by "Instructors'

Manuals" and "Student Handbooks." The manuals for each module contained a transcript, a summary of main themes, points for discussion, sample situations for applying stress coping skills, and a military lesson plan. The vignettes manuals provided a problem overview, a transcript, supplementary lecture material, and added discussion topics. The Student Handbooks contained synopses of the stress coping modules, vignettes, and seminars.

Implementation

The stress coping curriculum was implemented in Drill Instructor School as part of the Program of Instruction (POI) pertaining to leadership and to recruit evaluation. The materials were introduced incrementally at San Diego, being automatically incorporated into the POI, whereas there was a lag from production to use at Parris Island. Our project staff worked closely with the DI School Director and the Leadership Instructor at each depot in activating the program.

Program Evaluation

Several procedures were used to assess the effectiveness of the intervention, beginning with measures obtained in DI School. These consisted of audience evaluations and comprehension tests for the videotapes, ratings of all DI School instructional components at the time of graduation, and multiple measures of stress-related factors (e.g., perceptions of job stress, blood pressure, and heart rate) taken at entry and just prior to graduation. Because a control group was not possible, we used four cohorts from our prior San Diego studies as a comparison group for the evaluation of differences on the stress measures. This involved comparing data from the fourth and fifth cohorts--the first and second classes at both San Diego and Parris Island in 1986. Importantly, there are no significant differences between the comparison cohorts and the intervention cohorts in perceived stress, blood pressure, or heart rate at the start of DI School.

Audience evaluations were obtained from a variety of cohorts at each depot as the videotapes were produced and sequentially incorporated in the curriculum. Three rating dimensions were utilized: (1) "How likely are you to apply what was shown in the film to your work as a drill instructor?" (2) "How useful or applicable will the film be in your personal life?" and (3) "Overall, how interesting was the film?" Ratings were obtained on six-point scales, ranging from "not at all" to "very much." The comprehension tests consisted of ten fill-in and multiple choice items composed specifically for the content of a particular module. These data were obtained from the fourth cohort in 1986 at both depots, computing average percentage correct.

We also obtained ratings on six-point scales of the components of instruction at DI School from all graduating students in four cohorts at both San Diego and Parris Island in 1986. Twelve components were designated: depot briefing, close order drill, basic military subjects, leadership, individual combat training, marksmanship weapons training, physical fitness, first aid, stress coping instruction, SOP manual, recruit evaluation, and techniques of military instruction.

RESULTS

Audience Ratings and Comprehension Tests

The audience evaluation data for the modules were obtained from four cohorts in 1984 and 1985. The results were highly consistent across cohorts

11

and modules, particularly with regard to the rated likelihood of applying the material to one's own work as a drill instructor. The average module rating on this dimension was 5.3 (on a 6-point scale), whereas it was 4.9 for personal likelihood of usefulness and 5.0 for interestingness. Vignette evaluations were obtained from four cohorts in 1986, and from them the vignettes received an average rating of 5.0 for likelihood of applying the viewed material to one's work as a drill instructor. Similarly, the module comprehension test results were also quite favorable. A score of approximately 80% correct was achieved across modules for the two tested cohorts.

Components of Instruction at DI School

The intervention program's stress coping and recruit evaluation components received favorable ratings across cohorts and depots. The average rating across the eight cohorts was 4.7 for the stress coping component and 5.1 for the recruit evaluation component. The relative ranking of the stress coping component was higher than that received for depot briefings, individual combat training, marksmanship/weapons instruction, and techniques of military instruction. We were also able to obtain data on these differential judgments of DI School component value at a 3-month follow-up for the 4-86 San Diego cohort, and the stress coping component gained slightly in its perceived value relative to other components of instruction.

Stress Measures

The absence of an experimental control group indeed leaves ambiguity with regard to inferences about group differences, but the comparison group design was our best option. Regarding the physiological measures, at the start of DI School, there were no significant differences between the intervention and the comparison cohorts. At the time of graduation and at a 3-month follow-up testing, there were significant differences in heart rate and in diastolic pressure. Compared to the other cohorts, the intervention cohorts had lower mean heart rates at graduation [56.6 vs. 61.8, $t(363) = 6.21$, $p<.001$] and at the 3-month follow-up [60.9, $t(269) = 6.70$, $p<.001$]. They also had lower mean diastolic pressure at graduation [67.7 vs. 72.8, $t(366) = 7.00$, $p<.001$] and 3 months later on the drill field [65.5 vs. 75.6, $t(285) = 5.04$, $p<.001$]. The results for systolic pressure were in the same direction at the drill field follow-up testing but were not statistically significant.

Regarding measures of perceived stress and anger, at the time of graduation, the perceived stress of drill instructor job demands (an aggregate index) was significantly lower for the intervention cohorts, $t(319) = 2.32$, $p<.05$, but the groups did not differ at 3 months. On the anger measure (Novaco Provocation Inventory), there were no differences at graduation, but at the 3-month follow-up the intervention group was significantly lower, $t(213) = 4.34$, $p<.001$.

Considering the variation in the comprehension test scores obtained in conjunction with the module viewing, we examined to what degree comprehension affected the expected stress of drill instructor duty at the graduation testing of the 4-86 cohorts at both depots. For this analysis, we categorized participants into low versus high comprehension groups on the basis of a median split of the overall comprehension scores. Controlling for reading level and aptitude (GCT score), there were a number of significant differences between the partitioned comprehension groups. The high comprehension group is significantly lower in perceived stress associated with "expectations to produce an outstanding platoon" ($p<.003$), "long working hours" ($p<.006$),

12

"controlling emotions" ($p<.004$), "personal problems" ($p<.001$), and "constraints on autonomy" ($p<.02$).

Drill Field Seminars

Seven seminars were evaluated by the participating drill instructors, and it should be noted that the seminars were conducted following the pick-up briefings, which detracted from the drill instructor's time off. The obtained ratings were quite favorable, as the participants judged these seminars to be useful, applicable to their personal lives, and of good overall quality. The average rating of the "likelihood that what was learned would be applied to (one's) work as a drill instructor" was 5.0 on a 6-point scale. In their open-ended comments, it was frequently said that they liked the opportunity for discussion and that they received useful information about how to deal with stress.

SUMMARY

The military recruit training environment is an area for the development of stress coping skills. Not only must recruits learn how to deal with a plethora of demands and challenges of both a physical and psychological nature, but training personnel themselves must be able to cope effectively with a multiplicity of stressors arising from job tasks, problem recruits, time pressure, organizational frustrations, and their own aspirations. Previous research with Marine Corps Drill Instructors had demonstrated that drill field duty had significant stress effects, and the intervention program sought to reduce these adverse consequences to well-being and performance by teaching cognitive-behavioral techniques for coping with stress. While the intervention materials were presented in a videotape format, an important aspect of the program was its delivery in the context of DI School. Not only was the formal presentation in classroom made by a respected, high status instructor, but the videotaped content itself involved portrayals of real drill instructors and high status narrators. The results of the program evaluation indicate that the cohorts receiving the intervention rated the materials very positively and had significantly lower stress levels than comparison cohorts.

REFERENCES

Novaco, R.W., Sarason, I.G., Cook, T.M., Robinson, G.L., & Cunningham, F. (1979). Psychological and organizational factors related to attrition and performance in Marine Corps recruit training. Office of Naval Research, Report AR-001.

Novaco, R.W., Cook, T.M., & Sarason, I.G. (1983). Military recruit training: An arena for stress coping skills. In D. Meichenbaum & M. Jaremko (Eds.), Stress reduction and prevention. New York: Plenum Press.

Novaco, R.W., Sarason, I.G., Robinson, G.L., & Cunningham, F. (1982). Longitudinal analyses of stress and performance among Marine Corps drill instructors. Office of Naval Research, Report AR-007.

PHYSICAL FITNESS INCREASED CAN LEAD
TO ENHANCED SELF-ESTEEM

Robert J. Sonstroem
University of Rhode Island

Self-esteem is generally regarded as the most valid psychological indicator of favorable life adjustment and role performance. Moreover, people with positive self-esteem tend to be self-reliant and to be more capable of withstanding stress.

Physical exercise has long been associated with enhanced self-esteem. A critical review examining the pertinent research concluded that participation in exercise programs was associated with improved self-esteem scores (Sonstroem, 1984). However, past research in this topical area has lacked a guiding model and remains incapable of explaining why enhanced self-esteem may occur from exercise experience. Obviously, a knowledge of the mechanisms involved could lead to improved programs. The Exercise and Self-Esteem Model (Sonstroem & Morgan, 1989) proposes that successful performance of physical training activities influences self-efficacies, the expectations that one can successfully perform specific physical tasks. These physical self-efficacies are hypothesized to generalize to global self-esteem by means of perceived physical competence, a broader, more general perception of one's physical competence. The model appears to be capable of tracing self-perception change from performance of specific exercise tasks to more global feelings of self-regard. Model structure has received preliminary validation (Sonstroem, Harlow, Gemma, & Osborne, 1991).

However, self-esteem, particularly beyond the age of adolescence, may be quite resistant to change (Scheier & Kraut, 1979; Wylie, 1979). When change is accomplished within a group, it is very evident that many individuals within the group fail to change (Hilyer & Mitchell, 1979; Sonstroem, 1984). One provocative study failed to find significant self-esteem changes when an exercise-only group was compared to controls (Hilyer & Mitchell, 1979). However, a third group which combined exercise with relevant discussion and counseling, improved significantly in self-esteem compared to controls. In brief, if we are to change self-regard by means of an activity, then the activity must be of great importance to individuals. Second, individuals must come to see themselves as successful at the activity.

The purpose of this paper is to present mechanisms from the psychological literature which have been used to enhance self-esteem in programs designed specifically to do that. Suggestions are made for employing these agents of change within fitness training programs for the purpose of making individual progress more salient and important to the person.

Accurate self-evaluation represents the starting base for most self-esteem programs. People should have realistic perceptions of themselves which recognize personal assets and openly acknowledge limitations which must be corrected. The many performance tests found in fitness programs lend themselves to establishing self-perceptions which are grounded in reality. Feedback from these test should be complemented by the instructor for individuals who either tend to dismiss results or are unsure in their interpretation. The instructor who constantly expects the best provides the program with a positive principle of growth. Additionally, "expecting the

14

best" involves leader attitudes which truly accept people as individuals. The "Pygmalion" effect, "what you expect is what you get," is really a life truism. Cooley's "looking glass" theory hypothesizes that people regard themselves as they perceive others to regard them.

Realistic goals within a program will help to ensure personal success. Goals become valuable as they certify and highlight change. They must be important to the exerciser. Therefore, whenever possible, individuals should participate in establishing personal goals. Goal achievement, feedback, and accepting attitudes by leaders will emphasize success and the importance of exercise.

Social reinforcement represents another means of attaching success and importance to exercise experiences. The leader represents an "important other" in any exercise group. Therefore, leader recognition and the public identification of progress are powerful change agents. Group discussion is often employed by self-esteem programs for the purpose of accentuating progress. The squad is seen as as ideal vehicle for this type of agent within the military. Spouse involvement represents another means of prioritizing activities.

Finally, a successful self-esteem program incorporates the principle that ultimately people must accept self-responsibility for change. People with positive self-esteem tend to be more self-reliant. An inversion of this axiom posits that teaching people to be self-reliant increases self-esteem. Personal responsibility can be fostered in exercisers by emphasis on the personal volition, effort, and success accompanying fitness change. Log books containing personal goals, methods, and progress represent a mechanism for increasing self-responsibility. Ultimately, the career serviceman must be weaned from group programs and must assume personal responsibility for exercise. This process will be assisted by early practice in setting goals, self-monitoring during exercise, self-instructional techniques, and self-reinforcement. Teaching self-responsibility would appear to be important preparation for handling later stress situations. It is a principle that seemingly is reinforced by what we know about prison camp survival.

Time and space prevent greater elaboration of the above change mechanisms. It should be mentioned that the above mechanisms or agents also represent principles relevant to motor learning and to learning in general. Maximizing performance involves psychological as well as physical considerations. This is especially true for self-esteem enhancement.

REFERENCES

Hilyer, J.C., & Mitchell, W. (1979). Effect of physical fitness training combined with counseling on self-concept of college students. Journal of Counseling Psychology, 26, 427-436.

Scheier, M.A., & Kraut, R.E. (1979). Increasing educational achievement via self-concept change. Review of Educational Research, 49, 131-150.

Sonstroem, R.J. (1984). Exercise and self-esteem. In R. L. Terjung (Ed.), Exercise and sport sciences reviews (Vol. 12). Lexington, MA: The Collamore Press.

Sonstroem, R.J., & Morgan, W.P. (1989). Exercise and Self-esteem: Rationale and model. Medicine and Science in Sports and Exercise, 21, 329-337.

Sonstroem, R.J., Harlow, L.L., Gemma, L.M., & Osborne, S. (1991). Test of structural relationships within a proposed exercise and self-esteem model. Journal of Personality Assessment, 56, 348-364.

Wylie, R.C. (1979). The self-concept: Theory and research on selected topics, (Vol. 2, rev. ed.). Lincoln: University of Nebraska Press.

U.S. ARMY WAR COLLEGE STRESS MANAGEMENT PROGRAMS: TYPE A BEHAVIOR REDUCTION

Paul T. Harig, Ph.D.
Virginia A. Price, Ph.D.
United States Army War College
Carlisle Barracks, Pennsylvania

Irrespective of efforts to minimize it, there would still be individuals who suffer more stress than others; even if life dealt an even hand to all players and there was equality in the burden of aversive environments, life events, or minor daily hassles, some would be caught by their personal tendencies, quirks and vulnerabilities which engender stress (Cotton, 1990). These individuals are "stress-prone", breeder reactors of personal distress in stressful situations. Some of their characteristics include an inability to relax without feeling guilty; overplanning leisure time; perfectionistic tendencies; impatience with delays or interruptions or impatience with those who respond more slowly than expected; a chronic sense of time urgency and a drive to work at a faster pace, often with a compulsion to overwork; involvement in multiple projects with many deadlines; excessive competitive drive; an inability to be happy with one's accomplishments; and polyphasic thinking (multiple thoughts, a tendency to interrupt or rush the pace of conversation, and poor active listening).

Stress-prone people share the features which Friedman and Rosenman (1974) termed the "Type A" pattern in clinical studies of behavioral risk factors to coronary heart disease (CHD). Meyer Friedman, the cardiologist responsible for this classification beginning in the late 1950s, defined Type A behavior as an "action-emotion complex," an pattern built on arousal, impatience, anger and easily triggered irritability (Friedman & Rosenman, 1974). These tendencies may lead to maladaptive social adjustment as well as negative biobehavioral effects. Butcher et al. (1990) found that spouses of high Type A men described them as significantly more likely to have temper tantrums, act bossy, argue over minor things, become upset by unexpected events, and act irritable, critical, angry and tense. Recently, Williams' laboratory at Duke Medical Center (Williams et al.,1991; Suarez et al., 1991) has confirmed evidence for chronic SNS activation in Type As, as well as the interaction between the Type A behavior pattern, total serum cholesterol, and hostility on cardiovascular and neurohormonal response.

The Type A pattern has an adverse relationship with morbidity and mortality from chronic diseases associated with stressful lifestyles or exacerbated by stress. High levels of this behavior pattern were judged by an NIH review panel to be of the same order of magnitude of relative risk for CHD as elevated levels of systolic blood pressure, serum cholesterol, and smoking (The Review Panel on Coronary-Prone Behavior and Coronary Heart Disease, 1981). Yet, the critical pathogenic factors in this association have been more elusive because of differences in research methodology and the multifactorial nature of CHD which makes it difficult to isolate risk factors with universal effects. It is not surprising that the bulk of research efforts have been focused on the behavior-disease connection rather than on the modification of the Type A pattern itself. However, the amelioration of the stress-prone tendencies of Type A persons is a worthwhile goal regardless of the correlation to these disease end-points. Arguably, the enrichment to a person's quality of life that could result from improvement of family and work relationships is

independent justification for efforts to reduce the Type A pattern in stress-prone individuals.

In fact, prior research has demonstrated both health and interpersonal benefits result from the modification of the Type A pattern. Friedman et al. (1986) dramatically demonstrated that altering Type A behavior reduces cardiac morbidity and mortality in post-infarction patients. In contrast to controls who received group cardiac counseling, 592 participants who received a Type A behavioral counseling program not only attenuated this behavior but reduced their cumulative 4.5 year cardiac recurrence rate to less than half of the expected level. This program was then replicated in a group of apparently healthy middle-aged male volunteers at the U.S. Army War College. There, Friedman demonstrated a marked or profound reduction in Type A behavior in 41.9% of participants in a nine month counseling program, in contrast to only 8.9% in untreated controls (Gill et al., 1985). Moreover, those subjects who reduced their Type A behavior also exhibited significant reductions in their total serum cholesterol relative to those who had not changed. Friedman's group also demonstrated that there were no deleterious effects on leadership skills among the counseled participants, although there were significant collateral reports in improvement in their family situations as reported by spouses.

Based upon the positive effects of Friedman's intervention, the Army War College has continued to offer it to students who score high in Type A characteristics on structured interviews. Approximately 50 officers have participated each year since 1983. These War College students are the pool for future senior leadership positions in the U.S. armed forces. They comprise several hundred colonels and promotable lieutenant colonels selected by their services to attend an intensive 10 month curriculum of postgraduate studies in strategic leadership and national security studies which culminates in award of recognition for having achieved the highest level of professional military education. Stress management programs such as Type A counseling are included in the personal development opportunities available to these individuals in support of the leader development goals of the War College.

The immediate objectives of the U.S. Army War College Type A Reduction Program are:

Learning to recognize and monitor one's own Type A behaviors;

Understanding the health hazards associated with chronic exhibition of Type A behavior, and recognizing its negative effects on mental state, interpersonal relationships, and career;

Integrating the relaxation response, systematic self-observation, and daily practice of behaviors that are incompatible with Type A;

Management of anger and hostility and development of more effective ways to handle events, people, and frustrations that trigger anger responses;

Enhancement of family skills and options for handling domestic triggers of stress and anger; and

Recognition of the importance of maintaining positive control over an inner sense of well-being and control over self-esteem.

18

The Army War College program is built on a cognitive social learning model (Price, 1982). According to this model, Type A behavior is an outgrowth of the way that Type As view themselves and the world, and the set of personal beliefs about this relationship which fosters a variety of fears or anxieties that promote and sustain dysfunctional behavior. Consequently, efforts to reduce the Type A behavior pattern by focusing exclusively on the behaviors themselves have generally not been very effective (see Roskies, 1990) because these beliefs appear to get in the way of sustained behavior change (Price, 1982). Hence, the program addresses the need to examine and, if possible, change these belief systems as a way to effect permanent reduction in Type A behavior.

Price (1982) proposes three personal beliefs at the core of the Type A pattern: the belief that one's personal worth is assailable and that one must constantly prove himself, which leads to the fear of being judged as not having sufficient worth, and, therefore, not being valued or esteemed (lovable); that there is no orderly, causal relationship between moral behavior and its long range outcomes, which engenders a fear that good may not prevail, that good actions can produce aversive consequences; and, the belief that life is a "zero sum" game where resources are scarce and "your gain is my loss", leading to the fear that there will be an insufficient supply of resources necessary to maintain personal well-being. According to the proposed model, the Type A behavior pattern centers around the belief that one needs to prove oneself or that one is not good enough yet, which is expressed in the compulsive, achievement-oriented behavior of the Type A.

The most recent evaluation of the War College program is reported by Fava et al. (1991) who studied participants with a battery of psychological and physiological tests before and after the program. Following the program, participants displayed a significantly greater reduction in average daily caloric intake and levels of perceived stress, anxiety, hostility, depression, psychological distress, and Type A behavior than officers who did not participate in it. The Fava group also found significant comparative improvement in dehydroepiandrosterone-sulfate (DHEA-S) levels, which suggests there might be possible improvement in relative risk for atherosclerosis and cancer (Littman et al., unpublished). In addition to these findings, there have been numerous testimonials from program alumni and their spouses which attest to the benefits of a program focused on their stress-prone lifestyle. It appears, therefore, that at the very least the program is producing healthy effects by successfully interrupting a chain which, if otherwise unbroken, links additional personal distress and possibly premature disease.

REFERENCES

Butcher, J.N., Graham, J.R., Williams, C.L., & Ben-Porath, Y.S. (1990). Development and use of the MMPI-2 content scales. Minneapolis, MN: University of Minnesota Press.

Cotton, D.H.G. (1990). Stress management, an integrated approach to therapy. New York: Brunner/Mazel.

Fava, M., Littman, A., Halperin, P., Pratt, E., Drews, F., Oleshansky, M., Knapik, J., Thompson, C., & Bielenda, C. (1991). Psychological and behavioral benefits of a stress/Type A behavior reduction program for healthy middle-aged army officers. Psychosomatics, 32, 337-342.

Friedman, M., Thoresen, C.E., Gill, J.J., Ulmer, D., Powell, L.H., Price, V.A., Brown, B., Thompson, L., Rabin, D.D., Breall, W.S., Bourg,E., Levy, R., & Dixon, T. (1986). Alteration of Type A behavior and its effect on cardiac recurrences in post myocardial infarction patients: Summary results of the recurrent coronary prevention project. *American Heart Journal, 112*, 653.

Friedman, M., & Rosenman, R.H. (1974). *Type A behavior and your heart*. New York: Knopf.

Gill, J.J., Price, V.A., Friedman, M., Thoresen, C.E., Powell, L.H., Ulmer, D., Brown, B., & Drews, F. (1985). Reduction in Type A behavior in healthy middle-aged American military officers. *American Heart Journal, 110*, 503.

Littman, A.B., Fava, M., & Halperin, P. (unpublished research). *Physiological benefits of a stress reduction program for healthy middle-aged army officers*.

Price, V.A. (1982). *Type A behavior pattern, a model for research and Practice*. New York: Academic Press.

The Review Panel on Coronary-Prone Behavior and Coronary Heart Disease. (1981). Coronary-prone behavior and coronary heart disease: A critical review. *Circulation, 63*, 1199-1215.

Roskies, E. (1990). Type A intervention: Where do we go from here? In M. J. Strube (Ed.), Type A Behavior. [Special issue]. *Journal of Social Behavior and Personality, 5*, 419-438.

Suarez, E.C., Williams, R.B., Kuhn, C.M., Zimmerman, E.A., & Schanberg, S.M. (1991). Biobehavioral basis of coronary-prone behavior in middle-aged men. Part II: Serum cholesterol, the Type A behavior pattern, and hostility as interactive modulators of physiological reactivity. *Psychosomatic Medicine, 53*, 528-537.

Williams, R.B., Suarez, E.C., Kuhn, C.M., Zimmerman, E.A., & Schanberg, S.M. (1991). Biobehavioral basis of coronary-prone behavior in middle-aged men. Part I: Evidence for chronic SNS activation in Type As. *Psychosomatic Medicine, 53*, 517-527.

SURVIVABILITY

Stephen R. Band, Ph.D.
I. John Vasquez, M.Ed.
FBI Academy
Quantico, Virginia

"Shots fired! shots fired!.... One subject is down; three officers wounded." Two officers lie stunned and emotionally overwhelmed by the sight of their wounds. Immediately unable to defend themselves, they are highly vulnerable as another armed subject appears in the doorway. The third wounded officer fights on, firing until the second subject is incapacitated.

An excerpt from a movie? Unfortunately not! It is an all too real life and death drama law enforcement officers face as the war on drugs and violent crime continues. Criminal adversaries appear to value money and drugs more than human life itself.

FBI statistics, from the Uniform Crime Reports - Law Officers Killed and Assaulted (1989), identify occurrences between 1979 and 1988. Tables 1, 2, and 3 highlight the tragic circumstances that support a need to study the dynamics of survival. Over the identified 10-year time period, 841 officers were feloniously killed.

Can a law enforcement officer survive a short term life threatening violent confrontation? Will the officer go home at the end of a tour of duty? Does he or she have the will to survive and fight on when faced with death? The answers to these questions are personal issues and specific to individual capabilities that go beyond a rudimentary application of tactics. Even if combat tactics approach perfection, the level of physical fitness is optimal, and accuracy with a weapon is unmatched, an element is still missing-- survivability. Mental preparation and the personal will to survive constitute that missing element as SURVIVABILITY. The dictionary defines survivability as behavior "...resulting in or permitting survival" (Grove, 1981).

The Institutional Research Office at the FBI Academy, Quantico, Virginia, has initiated research to identify the human attributes associated with SURVIVABILITY. A pilot study has been conducted, expert opinion has been sought, and related literature has been gathered and reviewed. This article will review the findings in an effort to stimulate discussion among law enforcement professionals and illustrate the potential for training in this important area of concern.

SURVIVABILITY LITERATURE REVIEW

The United States space program and test pilots in popular literature have referred to elements of an aviator's personality that would support survival in a failing flight environment. These often dramatized elements of personality have frequently been referred to by cliches such as that used by Wolfe in the title of his book The Right Stuff, (1983). As part of their ongoing National Aeronautics and Space Administration (NASA) and University of Texas research project, Helmreich and Wilhelm (1989) identify clusters of "Right Stuff" personality traits in pilot selection. Two prominent personality dimensions were linked with successful pilot behavior under

dangerous flying condition: (1) goal orientation or behavior related to being motivated to attain objectives, and (2) interpersonal capacities or behavior related to the expression of empathy towards others.

Combat psychiatry research has offered insight into human performance under battle conditions (Belenky, 1987). The causes and prevention of combat stress reaction (CSR) are considered in relation to surviving life threatening circumstances. CSR, sometimes referred to as "battle fatigue," represents the emotional factors that prevent a soldier from fighting. CSR might then be theoretically viewed as a logical set of opposing behaviors in contrast to survivability. Marshall (1978) makes reference to the concepts of morale, unit cohesion, and leadership in relation to World War II combat survival. He states:

> I hold it to be one of the simplest truths of war that the thing which enables an infantry soldier to keep going with his weapons is the near presence or presumed presence of a comrade.

Gal (1983), conducting research regarding personality characteristics associated with Israeli defense force Medal of Honor recipients, identified leadership, devotion to duty, decisiveness, and perseverance under stress as significant attributes associated with these war heros.

Hobfoll (1988) reflects on the important interaction between the environment and the individual relative to surviving high stress encounters. He states, "...counting your losses when preserving resources is fatal...." Preoccupation with thoughts about loss may negatively affect one's capacity to survive a lethal confrontation. Thus, concerted efforts to avoid a mind set associated with loss may support survivability.

The concept of preserving resources can be exemplified through the comments of Gunnery Sergeant Carlos Hathcock, United States Marine Corps (Retired). He is credited with accomplishing 93 confirmed kills as a sniper during two combat tours in South Vietnam (Henderson, 1986). Hathcock's intimate first-hand knowledge of survivability is unquestionable. Gunny, as he prefers to be called, consented to be interviewed only for the purpose of assisting law enforcement research efforts to understand survivability in hopes that his experiences and contributions as a proven combatant might save lives of those who serve their profession.

A soft-spoken, unassuming man of honor, Gunny compared his behavior just prior to and during an operation, as isolating himself into an "invisible bubble." This mind set would "block thoughts of physiological needs, home, family, etc.--except the target." The actual time in the "bubble" could last from a few hours to several consecutive days, depending not only on the scenario to achieve the objective, but adjusting to unforeseen circumstances and conditions where an otherwise trivial mistake could cost the ultimate price (Vasquez, 1989).

As he reflected back over his distinguished military career, Gunny depicted a number of attributes he considered critical and necessary for survival. Among these are patience, discipline and the ability to achieve total concentration on the specific task at hand. When re-enforced by appropriate training, special orientation, and one's value system, these attributes may provide a law enforcement officer the edge to transform a life threatening situation to a positive outcome in terms of survivability.

Cognitive/behavioral psychological theory offers insight regarding the benefit of mentally rehearsing threatening or dangerous scenarios. Developing a thought-out plan of personal action in order to enhance one's perception of effectiveness in accomplishing a stressful task could positively affect an officer's ability to survive.

Bandura (1989) states:

People who believe they can exercise control over potential threats do not conjure up apprehensive cognitions and, therefore, are not perturbed by them...those who believe they cannot manage potential threats experience high levels of stress and anxiety arousal. They tend to dwell on their coping deficiencies and view many aspects of their environment as fraught with danger. Through some inefficacious thought they distress themselves and constrain and impair their level of functioning.

A classic example of cognitive rehearsal in a law enforcement setting is provided by C. R. Skillen (1982) in which the activities of a successful patrol officer are identified. This officer, who imagines best approach scenarios to emergency response situations that could occur during a tour of duty, plays out in his or her mind the best route to take from one location to another to improve a rapid response should the need arise. Additionally, the officer imagines a "what if" situation and develops an effective response for mental preparation in an actual confrontation and/or location. This type of cognitive rehearsal activity has been proven to be effective in relieving fears and enhancing performance in stressful encounters.

Mental preparation works against an officer who believes or is convinced that, if shot, he or she will die. However, mentally rehearsing and developing an effective belief system that, "If I'm shot, I don't have to die" can assist an officer in persevering through a critical situation. The mental preparation of inoculating oneself with thoughts of a well rehearsed plan might enhance survivability.

PRELIMINARY RESEARCH FINDINGS

Behavior identified in the literature, gathered from expert opinion, and believed to be theoretically linked to survivability was summarized to develop a pilot study questionnaire. During late 1989 and early 1990 the questionnaire was distributed to a broad group of federal, state, and local law enforcement officers who were students at the FBI Academy, Quantico, Virginia. The questionnaire was also administered at work or training sites in Illinois and California, and 207 completed questionnaires were available for analysis.

The pilot instrument asked respondents to identify the level of importance (of listed behaviors). On a Likert type scale of 1 to 5, officers rated effective performance in relation to surviving a short term violent law enforcement confrontation. Effective performance was defined as a violent confrontation that requires a lawful combative response, where the officer continued to function even though the final outcome could be death for the officer or adversary. The questionnaire consisted of a listing of behaviors that have been associated with human survival in settings not necessarily associated with the law enforcement profession. The items from the

23

questionnaire that appear on Table 4 are not in any order of importance or criticality.

Analyses of the pilot study data revealed the items listed below as those perceived to be most critical to officer survival in a violent confrontation situation. The items appear in order of importance except for items 3 through 5 which are of equal weight:

1. **SELF-CONFIDENCE IN PERFORMANCE**. The officer's mental frame of reference that a critical task can be performed effectively with a high probability of a successful outcome.

2. **TRAINING**. The officer's belief that prior training has been effective and useful, and confirms survival if utilized; practicum or classroom experience that convincingly portrays and reinforces survival in deadly confrontations.

3. **BELIEVING ONESELF EFFECTIVE IN COMBAT**. The officer's personal perception of being successful in a life threatening interaction with an adversary; a mental frame of reference in which the officers sees him or herself victorious in a deadly confrontation. An "I will win in battle" attitude or belief system.

4. **DECISIVENESS**. Generally understood as the officer's ability to make rapid and accurate decisions when confronted (at times by surprise) with a critical situation. An inability to be decisive would negatively impact on survivability.

5. **PERSEVERANCE UNDER STRESS**. Recognized as the officer's ability to mentally and physically continue to perform critical tasks when confronted with an extremely discomforting situation. An "I will live and fight on if wounded" attitude or belief system.

DISCUSSION

The concept of SURVIVABILITY represents a dynamic set of behaviors that should be considered in relation to certain law enforcement environments. Life threatening events associated with undercover operations, uniformed patrol, SWAT operations, and other specific hazardous law enforcement missions require personnel who can survive the virulent stressors associated with these unique operations (Band & Manuele, 1987).

Self-confidence in performance, training, belief in one's own effectiveness in combat, decisiveness, and perseverance under stress are behaviors or attributes identified in this pilot study as tantamount to law enforcement officer survival. The preliminary findings establish direction for future research and should not be considered as conclusive. Officers exposed to creative training opportunities that enhance these attributes may increase their personal potential for survivability.

Law enforcement must prepare personnel for the anticipated occupational challenges of the future. Training for the year 2000 and into the new century must be considered now. Survivability training should be an essential part of law enforcement curricula.

24

REFERENCES

Band, S.R., & Manuele, C.A. (1987). Stress and police officer job performance: an examination of effective coping behavior. Police Studies, 10, 122-131.

Bandura, A. (1989). Human agency in social cognitive theory. American Psychologist, 44, 1175-1184.

Belenky, G. (Ed.). (1987). Contemporary studies in combat psychiatry. New York: Greenwood Press.

Gal, R. (1983). Courage under stress. In S. Breznitz (Ed.), Stress in Israel. New York: Van Nostrand Reinhold Company.

Gove, P.B. (Ed.). (1981). Webster's third new international dictionary. Springfield, MA: G and C Miriam Company.

Helmreich, R.L., & Wilhelm, J.A. (1989). Validating personality constructs for pilot selection: status report on the NASA/UT project. NASA/UT Technical Memorandum 89-3. Department of Psychology. The University of Texas at Austin.

Henderson, C. (1986). Marine sniper. New York: Berkley Books.

Hobfoll, S.E. (1988). The ecology of stress. New York: Hemisphere Publishing Corporation.

Marshall, S.L. (1978). Men against fire. Gloucester, MA: Peter Smith.

Skillen, C.R. (1982). Combat shotgun training. Springfield, IL: Charles C. C. Thomas Publisher.

United States Department of Justice. (1989). Uniform crime reports: Law enforcement officers killed and assaulted - 1988. Federal Bureau of Investigation.

Vasquez, I.J. (1989). An interview with Carlos Hathcock. Unpublished interview notes. Virginia Beach, VA.

Wolfe, T. (1983). The right stuff. New York: Bantam Books.

TABLE 1

LAW ENFORCEMENT OFFICERS

FELONIOUSLY KILLED 1979-1988

WEAPON TYPE	FREQUENCY
HANDGUN	594
RIFLE	113
SHOTGUN	71
OTHER	39
KNIFE	19
PERSONAL WEAPONS	4
BOMB	1
TOTAL	841

* *

TABLE 2

LAW ENFORCEMENT OFFICERS

FELONIOUSLY KILLED BY FIREARMS
1979 - 1988

DISTANCE BETWEEN OFFICER AND OFFENDER IN FEET	FREQUENCY
0 - 5	43
6 - 10	114
11 - 20	110
21 - 50	49
OVER 50	37

TABLE 3

LAW ENFORCEMENT OFFICERS

FELONIOUSLY KILLED BY FIREARMS

1979 - 1988

LOCATION OF FATAL WOUND	FREQUENCY
FRONT UPPER TORSO	372
FRONT HEAD	252
FRONT UPPER TORSO	66
REAR HEAD	62
FRONT BELOW WAIST	21
REAR BELOW WAIST	5
TOTAL	778

TABLE 4

SURVIVABILITY QUESTIONNAIRE ITEMS

- honor
- physical fitness
- useful training
- emotional stability
- being aggressive
- hatred for adversary
- street savvy
- confidence in weapon
- duty
- fear of death
- decisiveness
- intelligence
- patriotism
- self-esteem
- anger
- religious convictions

- personal leadership ability,
- anticipated reward or recognition,
- believing oneself effective in combat,
- loyalty (to the law enforcement agency),
- perseverance under stress,
- having a leader/supervisor who is trusted
- leader/supervisor who is a positive role model,
- having a law enforcement agency that is supportive to personnel and
      backs-up officers decisions made on the street,
- a mutual responsibility among officers working together,
- individual morale/supportive family and/or friends at home,
- maintaining a winning attitude,
- confidence in one's ability to perform in a confrontation,
- previous combat experience,
- weather conditions,
- strong interpersonal bonds among a squad or shift that works together,
- mental rehearsal of combat action prior to action,
- a belief that one's destiny is controlled by oneself, and not outside
      forces.

SPIRITUAL FITNESS IN THE ARMY

Chaplain (LTC) Kenneth M. Ruppar
AMEDD Center and School
Fort Sam Houston, Texas

REGULATORY ASPECTS

In 1987, the Secretary of the Army published a pamphlet on spiritual fitness as part of the Army Health Promotion Program. It was entitled, "Fit to Win - Spiritual Fitness" (DA PAM 600-63-12). The purpose of this pamphlet is simply: "to provide the commander with a definition of spiritual fitness and suggest alternatives to enhance the soldier's total well-being increasing spiritual fitness" (p. 1).

Spiritual fitness or well-being is important. Soldiers, like civilians, function more effectively when they have a support system or sense of meaning which sustains them. Noted World War II leader, General George C. Marshall, expressed this well in an often cited statement about the soldier and the soldier's spirit:

> The soldier's heart, the soldier's spirit, and the soldier's soul
> are everything. Unless the soldier's soul sustains him, he
> cannot be relied on and will fail himself, his commander, and his
> country in the end. It is not enough to fight. It is the spirit
> that wins the victory. Morale is a state of mind. It is
> steadfastness, courage and hope. It is confidence, zeal, and
> loyalty. It is elan, esprit de corps, and determination. It is
> staying power, the spirit which endures in the end, and the will
> to win. With it all things are possible, without it everything
> else, planning, preparation, and production count for naught.

We take this seriously to mean that General Marshall and others are encouraged to help with things like the morale of the soldiers, spiritual fitness, and all those things that enter into the value system of the soldier.

This document (DA PAM 600-63-12) defines spiritual fitness as "the development of those personal qualities needed to sustain a person in times of stress, hardship, or tragedy. These qualities come from religious, philosophical, or human values and form the basis for character, disposition, decision making, and integrity."

The pamphlet affirms that this definition "presupposes that visible action stems from our spiritual health and comes from our set of values" (p. 1).

Such a concept of spiritual fitness supports the professional Army Ethic (FM 100-1 The Army, Ch. 4) of Loyalty, Duty, Selfless Service and Integrity.

This definition supports:

LOYALTY: To constitution, nation, army, unit, other soldiers.
DUTY: Obedience and disciplined performance despite difficulty or danger.
SELFLESS SERVICE: Willingness to sacrifice, even life.
INTEGRITY: Honesty, uprightness, avoidance of deception.

The Army's definition of Spiritual Fitness supports the ethic of Loyalty, Duty, Selfless Service and Integrity.

RELIGIOUS SUPPORT DOCTRINE AND BASIC PASTORAL CARE

By regulation (AR 600-63) the Army's Chief of Chaplains has Army Special Staff responsibility for several important programs relating to high stress events. These programs include the installation Chaplain Family Life Center Program, Spiritual Fitness Program, and Battle Fatigue Ministry. He further coordinates responsibilities around suicide prevention activities. These program areas all fit under the basic charge of the Army Chaplaincy which "in combat and peacetime is to perform and provide for the comprehensive religious support to soldiers, their family members, and other authorized personnel" (FM 16-1, p. 1-1).

One of the doctrinal principles of the chaplaincy is that, "The comprehensive religious support mission of the installation directly sustains the soldier on the battlefield" (FM 16-1, p. 6-2). As such, the religious support program of the installation is designed to sustain the soldier and family member in a variety of trauma settings. In recent years, this explains much of the focus on command interest in the quality of life experienced by Army families. There is a high degree of interest in what is going on with the families at home station during deployments, whether they be just exercises or something a little more extensive, such as the recent visit to Saudi Arabia.

The basic approach of ministry towards soldiers and family members by chaplains and chaplain assistants serves this basic charge of the chaplaincy,

When considering the question, "What does a chaplain do to develop hardiness, inner strength, etc., in soldiers and family members which assists them in coping with crisis events?" I turn simply to the basic sense of ministry present in the chaplaincy and the kinds of things I think are of interest to commanders. That is, how we take care of and help them take care of soldiers and their families. In reality, much that we do focuses on this issue, spiritual fitness. In that process, safeguarding the soldier's constitutional right to freely exercise religious choice is crucial to the fabric of the American nation and the military. Finding time for a new Christian to be baptized or space for a Muslim soldier to conduct Friday noon prayer, are part equally of the chaplain's role and the commander's role. They are important equally in the overall spiritual development and fitness of soldiers.

Everyone needs a schema to put on a chart. This one is from our basic chaplain field manual. It addresses the kinds of things we do in terms of religious support. Even though this says "Religious Support to Casualties," this is one way of addressing the kinds of things that go on for commanders with soldiers and families.

This chart of eight types of support to casualties is from FM 16-1, p. 5-20. With the exception, I guess, of ministry to the dying, the rest of these can be put with almost any kind of setting.

This chart reflects the variety of aspects of pastoral care. The key to ministry is applying the appropriate type to specific needs. It may be presence, visiting with a soldier or family. It may be a sacramental kind of

30

ministry, or it may be a chance to celebrate with them a positive moment. This is simply one way for putting together how it is that we can help support the religious and spiritual fitness of soldiers.

UNIT RELIGIOUS SUPPORT TO CASUALTIES	
TYPES OF RELIGIOUS SUPPORT	DEFINITIONS
MINISTRY OF PRESENCE	Being actively present and available to casualties
MINISTRY TO THE DYING	Providing specialized ministry for those whose death is imminent and/or probable.
MINISTRY OF SUSTAINING	Helping the seriously wounded or ill whose conditions will not change in the near future to move beyond present circumstances, toward hope.
CRISIS AND STRESS MINISTRY	Helping those in crisis to cope.
SACRAMENTAL MINISTRY	Providing specific religious ministration common among religious groups.
MINISTRY OF GUIDING	Assisting soldiers to make responsible decisions.
MINISTRY OF WORSHIP	Leading sessions in prayer, praise, thanksgiving, meditation on sacred writings, and in recommitting themselves to religious life.
MINISTRY OF CELEBRATION	Providing opportunities for soldiers to express their thanksgiving and praise to God and others for protecting them on the battlefield and for contributing to their well-being.

Underlying this is another three-part step for the chaplaincy. If asked to describe briefly what it is that we do, our comment in the words of our field manual would be: "Nurture the Living, Care for the Dying, Honor the Dead." All of these things support at various points in the lives of our soldiers, those three things.

RECENT DEVELOPMENTS IN THE ARMY

Let me run through briefly some recent developments in the Army which pertain, I think, to the issue of spiritual fitness.

1. Inventories: The Army's Health Services Command Staff Chaplain is trying actively to develop a self-report Spiritual Fitness Inventory for soldiers and families. We are looking at items available in the civilian sector on the relationship of religion to health. Part of the inspiration for this effort comes from the clinical chaplaincy research conducted by Elizabeth McSherry for the VA (Brocton, MA). I am open to suggestions you might have which may be of help to us. We want to develop some research instruments that we can use which will help us identify what it is soldiers are saying about themselves in the relationship of some spiritual fitness and values to the way they go about conducting their lives.

2. The Department of the Army, Office of the Deputy Chief of Staff for Personnel (DCSPER), currently is revising the Spiritual Fitness pamphlet in the Health Care Promotion Program. The current pamphlet may be too Judeo-Christian in its perspective, and we need to expand that to include a much broader perspective.

3. The Army Chaplaincy continues to work with the Army Medical Department in the development of the manual regarding combat stress control. This manual includes efforts to integrate Chaplain Battle Fatigue Ministry doctrine with

the emerging medical department doctrine around prevention, intervention and treatment of combat stress casualties.

4. One program developed at Fort Hood, Texas, about five years ago and used to assist the preparation of units for deployment to the National Training Center in California, is called Battleproofing the Inner Person: A Will and Faith Program. Chaplain (LTC) Thomas Mitchiner developed this program while hospitalized for two months for the third of four cancer operations. "B-TIP, as the program came to be called, strengthens the will and faith of the soldiers who participate so they they can cope with personal adversity, perform the military mission, and survive on the battlefield even if wounded or taken prisoner" (MCR, PB16-87-2 [Test] July 1987, pp. 7-50).

5. In years past, the Army conducted regular monthly training in programs called among other names, "The Chaplain Hour," Character Guidance, or "Our Moral Heritage." These lectures provided similar material to be presented Army-wide. Like mandatory worship at the military service academies, these monthly training lectures no longer exist. Individual chaplains are able to take the initiative and get training experiences scheduled for soldiers on topics related to leadership, moral values, spiritual issues, etc. Such classes, when mandatory training, ought not reflect a particular church bias. Similar programs conducted as part of the optional post-wide religious (i.e., chapel) program are much more reflective of specific faith traditions.

6. Current emphasis in Army reunion programs following deployments and the new Army Career Alumni Program (ACAP) include chaplain leadership with issues of grief, re-entry, and transition.

7. Operation Desert Shield/Storm. Chaplain ministry during this deployment continued to emphasize the basics of quality pastoral care rather than new Whiz-Bang programs. The basics of one to one and small group support and sharing, counseling, and worship, prayer, Bible study, and sacraments, rites, and ordinances. Final after action reports are not all completed and evaluated. Designated groups at various locations and levels within the Army structure are evaluating lessons learned. Some findings include:

(a) increase in worship attendance in desert and home installations. Continues up.

(b) many chaplains found increased demand of soldiers for sacramental worship.

(c) increased interest in prayer and Bible study groups. Two examples:

(1) USAR: Chaplain (COL) David Hoyme of the 13th Evacuation Hospital, Madison, Wisconsin. His home congregation, following a Bible reading program of the national Headquarters (ELCA) gave 200 Bibles. The reading, designed to begin at mobilization station, actually began in January. Six Bible reading/study groups followed the program. Four groups were soldier-led and two were chaplain-led. According to Chaplain Hoyme, some soldiers began as Biblically illiterate; others were "well-versed." There was a sense of connection with the people back home in Madison who were following the same program.

(2) Chaplain (MAJ) William C. Shellnut, deployed from his Clinical Pastoral Education (CPE) Residency at Brooke Army Medical Center (BAMC) here in San Antonio, reported conducting a Bible study in his tent when a SCUD alert came. The group put on protective masks and continued the Bible study with prayer. It was a positive bonding experience.

(3) The purpose of these examples is simply to help illustrate the religious support focus of basic pastoral care to soldiers. Similar efforts were supplemented at home station with other chapel programs.

(d) increased baptisms, increased conversions to Islam, etc.

(e) great demands for thousands of crosses, medals, rosaries, etc.

(f) A final point, and this may be related, is that a number of units not authorized chaplains going into the desert whose commanders said, "I want one." And they were given one. I'd like to believe that was more than a rabbit's foot for the unit but a very important member of that commander's staff. It remains to be seen whether they will be willing to give up someone in their unit now to get a chaplain authorized.

CONCLUDING REMARKS

In conclusion, let me repeat the definition the Army uses currently for spiritual fitness: "The development of those personal qualities needed to sustain a person in times of stress, hardship and tragedy. These qualities come from religious, philosophical, or human values and form the basis for character, disposition, decision making and integrity." Chaplains rely on proven elements of pastoral care in the quest for spiritual fitness for soldiers.

"The UMT assist the commander by providing spiritual, moral and religious support to the soldiers of the unit. This support is designed to meet their religious needs and help them achieve inner stability, calm and peace. Inner strength reenforces bonding among soldiers and enhances both individual and group awareness" (AR 165-1 para 4-3b[1]).

SPIRITUAL ASPECTS OF THE TRAUMATIC STRESS SYNDROMES: ISSUES OF HARDINESS AND RESILIENCE

Robert D. Parlotz, D.Min., Ed.D., NCC
Department of Behavioral Science
Northwest College, Kirkland, Washington
and
Headquarters Fourth Air Force (AFRES)
McClellan Air Force Base, California

Psychic stress, as exhibited in the spectrum of the traumatic stress syndromes, including post-traumatic stress disorder, combat or battle fatigue, and operational fatigue, is more than a cognitive phenomena, more than a psychobiological or neuropsychological and phenomenological event, and more than a social interaction. Catastrophic events and their accompanying traumatic experiences are also spiritual events. Psychic stress is a phenomena of the whole person. The experience of event-specific, traumatic stress is essentially a spiritual phenomena in that it involves a significant, personally confrontational encounter with the individual's sense of values, perception of the world (or world view), awareness of being, and assignment of meaning and purpose to the experienced event(s). Traumatically stressful experiences tend to force a re-examination of the victim's world view, perceived order-of-things, and sense of self-related-to-environment and of self-related-to-the-awareness-of-ultimacy. This inescapable confrontation with alienation and abandonment and the tragic elements of existence are difficult to process, even for the theological professional and clinician (Garvey, 1989).

Figure 1 exhibits the integration of the affective, cognitive, and spiritual adaptive domains as an individual engages in the personal sojourn from victimhood to survivorhood in the experience of event-specific, psychic stress (Parlotz, 1991c). Psychic stress is initially an affective event (see Domain A in Figure 1) heightened by non-symbolic, sensorimotor processing of the experience with significant biopsychological activity (van der Kolk, 1984, 1986, 1988) while the individual attempts to formulate an action response by means of intuitive cognitive processing. This initial cognitive processing of the catastrophic event is based in part on the individual's developmentally determined behavioral paradigm and on the individual's training in preparation for contingencies. During this acute phase of the traumatic experience, the individual seeks for concrete reassurance of security (see Intersecting Domain 1 in Figure 1). As the individual establishes a sense of safety following the catastrophic event (see Intersecting Domain 2 & Domain B in Figure 1), the affective processing and its initial "auto pilot" cognitive-behavioral response turns to a cognitive processing at a higher level of consciousness (cf. Figley, 1985; Raphael, 1986; Green, Wilson, & Lindy, 1985; Bartano & Wright, 1990). This cognitive processing at higher levels of consciousness includes the individual's total person in the growth from victimization to survivorhood (see Intersecting Domain 3 & Domain C in Figure 1). The individual ultimately must incorporate the traumatically stressful experience into personally lived history. In order to affirm one's survivorhood, the individual engages the images of the past on a spiritual level of consciousness struggling with a sense of abandonment and alienation, with a loss of meaning and purpose, and with a sense of detachment from one's future in an effort to overcome this existential emptiness through a sense connectedness of the past, the present, and the future (Tillich, 1955, 1967; Pauck & Pauck, 1989; Krell, 1981; Matheny,

1984; Brisco, 1985). The pain of psychic stress is, in part, a disconnectedness of the person's past, present, and future. Rollo May (1991) connects this to the creation of myth.

> Myths are our self-interpretation of our inner selves in relation to the outside world. They are narratives by which our society is unified. Myths are essential to the process of keeping our souls alive and bringing us new meaning in a difficult and often meaningless world. . . . Every individual who needs to bring order and coherence into the streams of her or his sensations, emotions, and ideas entering consciousness from within and without is forced to do deliberately for himself what in previous ages had been done for him by family, custom, church, and state. In the therapy myths may be a reaching out, a way of trying out new structures of life, or a desperate venture at rebuilding his or her broken way of life. Myths, as Hannah Green put it, are "sharers of our loneliness" (May, 1991, pp. 20-21; cf. Brennan, 1980).

INTERDISCIPLINARY FOCUS

To study traumatically stressful experiences, one must engage the data with an interdisciplinary focus of intervention and research (Alexandrovsky, 1991) which includes consideration of self-efficacy (Solomon, Benbenishty, & Mikulincer, 1991) which incorporates an understanding of the event-specific nature of psychic stress, psychological symptomatology, and developmental dynamics, and which includes consideration of the spiritual dimension of human experience (Coles, 1990; Dugan & Coles, 1989; Colligon, 1985; Parlotz, 1991a, 1990a, 1990b). The stress resistance model of Hobfoll, termed the model of ecological congruence, emphasizes individual traits and personal and cultural values, highlighting the important process and interaction between the individual and the environment. The overall ecological stress-resistance process determines the valence of effect of the resources, needs, time, strain, perception, and values (Hobfoll, 1985). Active consideration of values moves the clinician, as well as the researcher, into the realm of the individual's belief system (Coles, 1986), hence into considering the spiritual elements of the person's psychic stress. However, interdisciplinary study of event-specific psychic stress must expand upon Bandura's conceptualization of self-efficacy, which sees susceptibility to dysfunction and survivor resilience as more than a function of individual fortitude (Bandura, 1986; Solomon, 1989). The complex interplay of variables pushes the limits of investigative, assessment, and psychometric tools beyond quantitative analysis (Lyons, 1991; Dugan & Coles, 1989). This requires theoretical orientations with cognitive adaptation models (McCammon, Durham, Allison, & William, 1988) and the person-in-environment framework (Wilson, 1989; Vosler & Proctor, 1990) plus expanding the model(s) to include the full Gestalt of human experience. One such expansion may be seen as an affective-cognitive-spiritual adaptation to traumatic experiences, presented in this paper.

DEFINITION OF SPIRITUALITY

In the social and behavioral sciences, spirituality may be seen only as a theological phenomena. For some, it may even be seen as a factor to be avoided as impossible to quantify or as irrelevant to mental health adaptation. Some may find difficulty in the complexities of ecclesiastical differences and functional piety (Moberg, 1986). Certainly, religious-based denial as a primary source of support for coping with crisis does indeed frustrate clinicians (York, 1989). It is possible to step beyond sectarian ideologies and conceptualize a pluralistic, working definition of spirituality which integrates affective, physical, cognitive, and spiritual aspects of human nature. One can set aside the body-soul split which often dominates sectarian definitions of spirituality and employ a definition which seeks psycho-somatic integrity (Maloney, 1979) and that is heavily grounded in concrete human experience (Wulf, 1969).

Spirituality may be defined as a way of being and experiencing that comes about through awareness of a transcendent dimension. It may be characterized by certain identifiable values in regard to self, others, nature, life, and whatever people consider to be the "ultimate" (Elkins, Hedstrom, Hughes, Leaf, & Saunders, 1988). Fowler (1981) identified six stages of faith or spiritual development representing qualitatively different ways of reasoning. Psychiatrist Gerald May initially suggested that spirituality was a basic human--"the direct feeling level experience of the ground of being, or of the process or flow of the universe" (May, 1974, p. 85). He later revised this position,

asserting that spiritual experience is a clarification of perception or insight into the nature of "how-things-really-are;" hence, "spiritual experience acts like a window" (May, 1977, p. 85). May further suggests that a basic fear of losing one's self is the underlying anxiety toward spiritual experience in Western culture. A sense of identity related to the infinite is seen as the means by which one finds comfort in the face of death (May, 1974). Others have suggested that identity development cannot be separated from the context of spiritual development (Highlen, Myers, Hanley, Speight, Reynolds, Adams, & Cox, 1986; Myers, 1981). Feminine spirituality has been identified as striving for balance, harmony, sympathy with life, and a sense of the dynamic continuity of being (Cunningham, 1985; O'Connor, 1985). Shafranske and Gorsuch (1984) describe spirituality as the courage to look within and to trust involving a deep sense of belonging, wholeness, connectedness, and openness to the infinite (cf. Benner, 1989). The area of diagnosis employing spiritual themes presented by an individual has received extensive attention by Pruyser (1976) and was the focus of a research study by Draper, Meyer, Parzen, and Samuelson (1965).

In a comparative study of Christianity, existentialism, Judaism, Zen Buddhism, and shamanism, Canda (1988) used qualitative data analysis of interviews with practitioners to develop a comprehensive conceptualization of spirituality which accommodates the diversity of these different faith groups and relates specifically to the professional concerns of the social and behavioral sciences.

Spirituality is conceptualized as the gestalt of the total process of human life and development, the central dynamic of which is the person's search for a sense of meaning and purpose through relationships with other people, the nonhuman environment, and the ultimate reality (variously conceived in theistic, atheistic, or spiritistic terms) (Canda, 1988, p. 30).

The working definition above allows the clinician and researcher to conceptualize spirituality for purposes of theory building and research across religious and religious culturally defined differences. However, in clinical practice, one does not encounter the spiritual domain without sectarian identification, ideation, symbols, rites, rituals, and practice. Spirituality is, after all, a personally defined, existentially and phenomenologically experienced, domain for each person and is reflected in the groups which the individual corporately represents.

SPIRITUAL FACTORS IN PSYCHIC STRESS

The author engaged in intervention activities with U.S. Air Force Reserve personnel (n = 584) returning home from deployment in Operations Desert Shield/Storm. The following items are based upon analysis of recurrent regularities in topics, themes, events, and dynamics which emerged during qualitative investigation employing semistructured, open-ended interviews, including individual, family, and small group interventions in May through August, 1991. Although these findings may be divided into physical, intellectual, emotional, relational, and spiritual factors, for the purposes of this paper, only the spiritual have been considered.

Spiritual factors in event-specific, psychic stress include at least the following: (1) feelings of emptiness and/or abandonment,--particularly, when deployed in separation from one's normal unit, from one's trusted immediate unit leadership, and/or from those with whom one regularly trains, (2) feeling

spiritually lonely and alienated, and other feelings associated with a sense of relatedness and belonging, (3) looking for magical solutions (i.e., continuing to employ a normal initial, ego defensive response of magical thinking as if it were a relevant world view and thus blocking growth), (4) doubt in religious beliefs or belief system, and/or perceived failure of one's world view (i.e., belief in the way things are supposed to happen), (5) feeling unforgiven (sometimes related to survivor guilt), (6) cynicism about specific activities and about life in general, (7) loss of meaning and purpose in life, and (8) the need to prove one's self worth.

Spirituality is related to an individual's belief system. Levine and Lightburn (1989) identify the significance of belief systems. Belief systems are individually constructed interlocking interpretations of reality that not only define each person's map of reality but connect feelings to behavior and behavior to feelings. Belief systems may be seen as the same as or merging with "life themes"--fundamental constructions of reality which find continuity in how an individual perceives significant events or experiences, which serve to filter, organize, and interpret reality, and which "direct a person's actions through life" (Emery & Csikszentmihalyi, 1981b, p. 4; cf. Csikszentmihalyi & Beattie/Emery, 1979; Emery & Csikszentmihalyi, 1981a). These systems and themes develop in childhood and become consolidated through developmental crises (Clasper, 1978; Fowler, 1981; Squire, 1978; Renard, 1988). The sensitive clinician will discover access to feelings and behavior which can be obtained only through discussion of beliefs and belief systems. Almost every process of clinical practice involves an effort to understand belief systems, to resolve the conflict created by belief system change, and, when indicated, to create belief system change. Identification of belief systems, therefore, offers practitioners a structural frame to access what is often unspoken. Clinicians struggle daily with strategies to modify or change beliefs. Belief system construction, dissonance, and the process of belief system change need to be considered in dealing with psychic stress.

Psychic stress contains a spiritual phenomena of abandonment and alienation. Carmiol and Breznitz (1991) report that Holocaust victim/survivors and their descendants, almost five decades after the exposure to the trauma tend to support the more centrally located political parties, express greater belief in God, and a greater belief in a better future when compared with their non-Holocaust cohorts. The issues of faith and the Holocaust experience have received attention by Berkovitz (1973), Rubenstein (1966), Liebman (1978), and Liebman and Don-Yehiya (1986). Contending with "a silent God" in the Auschwitz experience and afterward is a struggle in faith which must transcend the tragic and find, affirm, and maintain one's faith "altogether outside of the means that define their existence and authenticity" (Rosenfeld, 1980, p. 114). Rosenfeld comments further, "Bereft of language, silence itself occasionally functions as an expressive means of faith, even as a form of prayer, but only if it is a committed silence, turned toward the Voice, even in its own Silence" (p. 114; cf. Dupre, 1984). Prayer, like most other expressions of the Holocaust, tends to be halting and crippled. For Schwarz-Bart (1961), his novel ends in intentional ambiguous and unresolved struggle between the forces of life and the forces of death, yet takes a leap beyond this limited state-- though victimized the victim stands as a "refutation of the night" (Rosenfeld, 1980, p. 188).

The Vietnam War experience has fostered spiritual reflection by veterans such as Wheeler (1982), Kimball (1988), Mahedy (1986), Steer and Dudley (1982),

Helle and Coppin (1985), Roever and Fickett (1986), and Dean and Putman (1988). These authors not only tell about their experiences in Vietnam but also about their experiences with traumatic stress syndromes, including post-traumatic stress disorder. Many of these works exhibit a parallel to the earlier Holocaust reflections. Archibald MacLeish's poem, "The Young Dead Soldiers," used during the dedication of the Vietnam Veterans Memorial, also embraces these same elements (MacLeish, 1976).

Spiritual support is very often ritualized (cf. Turner, 1969; Tyler & Grifford, 1991; 1989; Icaza, 1989) and filled with symbolism (O'Donnell, 1982; Renard, 1983). The implication of spiritual support has been explored by Ireland (1991) in a quantitative-descriptive cross-sectional study of Puerto Rican Pentecostal churches in Boston based on detailed interviews with church ministers. Smith (1986) identified a reconciling effect of social support within black spirituality. Unresolved survivor guilt in combat veterans has been significantly affected by symbolic memorials and purification rituals, such as, the Native American sweat lodge (Williams, 1987, pp. 87-88; Magnuson, 1982). The sweat-lodge ritual traditionally was used to prepare for war, to heal the sick, to purify and rejuvenate after physical exertion, and to provide participants with heat, sensory deprivation, close physical contact in a small space, prayers, and religious leadership. Wilson (1989) sees the sweat-lodge ritual as contributing to the treatment of psychological and physiological symptoms of post-traumatic stress disorder. Green and her colleagues (1985) suggest that psychological role or modality, ability to seek support, and personal interpretations of events constitute personal variables that impact directly on the development of post-traumatic stress disorder. "Faith traditions utilize sacred rites and rituals" wherein the individual exhibiting the symptoms of traumatic stress syndromes, and, specifically, post-traumatic stress disorder, confronts his or her struggle with "the certainty" inherent within one's faith (Jacob, 1987, p. 71).

CONTRIBUTIONS OF SPIRITUAL INTERVENTION

An interdisciplinary focus on the care of persons experiencing the traumatic stress syndromes needs clinicians with various orientations and contributions to be offered in a timely manner. The role of the clergy should be an integrated part of this intervention process. The author's work in developing a crisis intervention model for pastoral care and counseling, called "Trauma Pastoral Care" (Parlotz & Frissell, 1988a, 1988b; Parlotz, 1990a, 1990b), is presently used within the United States Air Force Chaplain Service, by some NATO allies, and in civilian clergy response to disasters, multiple casualty events, and trauma. The context of this therapeutic and pastoral intervention activity is part of an affective-cognitive-spiritual adaptation theory of traumatic or psychic stress (Parlotz, 1991a, 1991b). The impact of traumatic experience is seen in terms of direct and indirect influences. Victims experience abandonment anxiety (Bowlby, 1960, 1984; Golden, 1990); Nicholson, 1988) and attempt to cope by means of transitional objects (Winnicott, 1965, 1971; Phillips, 1988; Davis & Wallbridge, 1981; Applegate, 1989; Golden & Hill, 1991; Chescheir & Schulz, 1989). An anxiety finger-print of the acute traumatically stressful experience is stored in dissociated frozen-frames of memory (Jaffe, 1968; van der Hart, Brown, & van der Kolk, 1989; van der Kolk & van der Hart, 1989), due to arousal through neurotransmitter activity (van der Kolk, Greenberg, Boyd, & Krystal, 1985; Friedman, 1991) and possibly dendrite growth (Kreutzberg, 1975; International Symposium on Dendritic Cells in Lymphoid Tissues, 1991) as well as other

biopsychological factors (see Domain A in Figure 1). This affective experience is facilitated by crisis intervention strategies as the victim works through traumatic stress cognitively and spiritually to survivorhood (Parlotz, 1991a; Lake, 1966; see Intersecting Domains 2 & 3 in Figure 1).

The practice of trauma pastoral care requires an understanding of the nature of traumatic events and their effects upon individuals and a therapeutic ability to (a) engage victims in an aggressive ministry of presence (e.g., "pastoral care" encounters with the aim to provide support through presence and the employment of brief informal counseling skills; daily visits to all base personnel; visits during all operational briefings and debriefings; off duty/resident area visitation), (b) facilitate catharsis (i.e., here-and-now focus, buddies oriented, mission effectiveness oriented), (c) network resources (i.e., group cohesion oriented; linking of individual and needs with available resources), and (d) enable change/growth from victimhood to survivorhood in coping with acute- and post-traumatic stress reactions. The practice of trauma pastoral care seeks to respond to the total person who is processing psychic stress from the affective experiencing of the immediate event through the cognitive struggle with this experience and to facilitate spiritual adjustment to this historical experience (see Intersecting Domains 1 & 3 in Figure 1). Presence (Avery, 1986; Parlotz, 1990b), active empathic listening (Katz, 1985; Parlotz, 1990b, 1991b) , and spiritual ministrations, such as, the pastoral blessing (Pruyser, 1976) and ritual (Worgul, 1981), meet symbolic and concrete needs to reestablish a sense of security and counter abandonment anxiety, and provide a transitional object function during the catastrophic event and as the victim initially adapts (Parlotz, 1991b; see Intersecting Domain 1 in Figure 1).

An on-going spiritually-oriented intervention (as identified in Intersecting Domain 3 in Figure 1) should focus on seven categories of the spiritual symptoms of traumatic stress syndromes: (1) distrust and fear, (2) rejection and betrayal, (3) futility, (4) alienation and estrangement, (5) loss and grief, (6) guilt and shame, and (7) isolation and withdrawal (Jacob, 1987). A spiritual intervention assists in three unique forms of change: (1) a creative action of rebuilding, (2) a redemptive action of turning around, and (3) a sanctifying action of renewal (Jacob, 1987).

During debriefing activities with Air Force Chaplain Service personnel trained in "Trauma Pastoral Care" (Parlotz & Frissell, 1988a, 1988b; Parlotz, 1990a; 1991a, 1991b), they reported that, as they employed this model during Operations Desert Shield/Storm, situations of elevated stress and the alienation of deployment were diminished by the ministry of present employed in trauma pastoral care and triage. This function appears to have functioned as a defusing activity (Mitchell, 1983) and also identified in the studies of the Gander, Newfoundland, military air disaster (Bartone & Wright, 1990; Wright, Ursano, Bartone, & Ingraham, 1990). The action of the chaplain and other persons in care giving roles, responding in the midst of the catastrophic event(s) and immediately afterward, functioned to assist in lessening insecurity as a transitional object. The chaplain is seen as carrying an additional phenomenological and existential identity as representing the Transcendent in the midst of chaos. This is in part a projection of the subjective faith of each individual and a function of the cultural identity of the chaplain. These factors represent activities depicted in Intersecting Domain 1 in Figure 1.

CONCLUSION

Event-specific, psychic stress is experienced initially as an event of raw emotion, hence, an affective experience with psychobiological and neuropsychological phenomena. In the immediate time period following these events, the individual begins to cognitive process the event, including difficulties dealing with the re-experiencing of the event as the dissociative mental images melt and are refrozen in attempts to avoid and numb its intensity. Spiritual processing of the event is a necessary function of adaptation. Spiritual work focuses on the alienation felt in the psychic stress experience, seeking to identify meaning and purpose through relationships with other people, the nonhuman environment, and the ultimate reality (variously conceived in theistic, atheistic, or spiritistic terms).

REFERENCES

Alexandrovsky, Y. (1991, July). A commentary on the Moscow 1990 PTSD conference. Journal of Traumatic Stress, 4, No. 3, 437-438.

Applegate, J.S. (1989, Spr.). The transitional object reconsidered: Some sociocultural variations and their implications. Child and Adolescent Social Work Journal, 6, No. 1, 38-51.

Avery, W.O. (1986, Dec.). Toward an understanding of ministry of presence. Journal of Pastoral Care, 40, 342-353.

Bandura, A. (1986). Social foundation of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bartone, P.T., & Wright, K.M. (1990, Oct.). Grief and group recovery following a military air disaster. Journal of Traumatic Stress, 3, No. 4, 523-539.

Benner, D.G. (1989). Toward a psychology of spirituality: Implications for personality and psychotherapy. Journal of Psychology and Christianity, 8, No. 1, 19-30.

Berkovitz, E. (1973). Faith after the Holocaust. New York: Ktav Publishing House.

Bowlby, J. (1960). Separation anxiety. International Journal of Psychoanalysis, 41, 89-113.

Bowlby, J. (1984). Violence in the family as a disorder of the attachment and caregiving systems. American Journal of Psychoanalysis, 44, 9-27.

Brennan, A. (1980). Myth in personal spirituality. Religious Education, 75, No. 4, 441-451.

Brisco, L. (1985). Spiritual distress in post-myocardial infarction patients. M.Nurs. thesis, University of Washington.

Canda, E.R. (1988, Winter). Conceptualizing spirituality for social work: Insights from diverse perspectives. Social Thought, 14, No. 1, 30-46.

Carmiol, D., & Breznitz, S. (1991, July). Personal trauma and world view—are extremely stressful experiences related to political attitudes, religious beliefs, and future orientation? Journal of Traumatic Stress, 4, No. 3, 393-405.

Chescheir, M.W., & Schulz, K.M. (1989, Spring). The development of a capacity for concern in antisocial children: Winnicott's concept of human relatedness. Clinical Social Work Journal, 17, No. 1, 24-39.

Clasper, P. (1978). Christian spirituality and the Chinese context. South East Asia Journal of Theology, 18, No. 2, 1-12.

Coles, R. (1986). The moral life of children. Boston: Atlantic Monthly.

Coles, R. (1990). The spiritual life of children. Boston: Houghton Mifflin.

Colligon, J.C. (1985). Influence of religiosity and religious denomination on risk of coronary heart disease, selected controllable risk factors, and health habits (Baptist, Bible, Adventist, Lifestyle, Health). Ed.D. dissertation, University of Southern Mississippi.

Cunningham, A. (1985). Feminist spirituality. Chicago Studies, 24, No. 1, 3-16.

Csikszentmihalyi, M., & Beattie/Emery, V.O. (1979). Life themes: An exploration of their origins and effects. Journal of Humanistic Psychology, 19, 45-63.

Davis, M., & Wallbridge, D. (1981). Boundary and space: An introduction to the Work of D. W. Winnicott. New York: Brunner/Mazel.

Dean, C., & Putman, B. (1988). Nam vet: Making peace with your past. Mountlake Terrace, WA: Point Man International.

Donovan, D.M. (1991, July). Traumatology: A field whose time has come. Journal of Traumatic Stress, 4, No. 3, 433-436.

Draper, E., Meyer, G.G., Parzen, Z., & Samuelson, G. (1965, Sept.). On the diagnostic value of religious ideation. Archives of General Psychiatry, 13, 202-207.

Dugan, T., & Coles, R. (Eds.). (1984). The child in our times: Studies in the development of resiliency. New York: Brunner/Mazel.

Dupre, L. (1984). From silence to speech: Negative theology and trinitarian spirituality. Communio: International Catholic Review, 11, No. 1, 28-34.

Elkins, D.N., Hedstrom, L.J., Hughes, L.L., Leaf, J.A., & Saunders, C. (1988). Toward a humanistic-phenomenological spirituality: Definition, description, and measurement. Journal of Humanistic Psychology, 28, No. 4, 5-18.

Emery, V.O.B., & Csikszentmihalyi, M. (1981a). An epistemological approach to psychiatry: On the psychology/psychopathology of knowledge. Journal of Mind Behavior, 2, 375-396.

Emery, V.O.B., & Csikszentmihalyi, M. (1981b). The socialization effects of cultural role models in ontogenetic development and upward mobility. Child Psychiatry and Human Development, 12, 3-18.

Figley, C.R. (1985). From victim to survivor: Social responsibility in the wake of catastrophe. In C. R. Figley (Ed.). Trauma and its wake: The study of post-traumatic stress disorder (pp. 398-415). New York: Brunner/Mazel.

Fowler, J.W. (1981). Stages of faith: The psychology of human development and the quest for meaning. San Francisco: Harper & Row.

Friedman, M.J. (1991, Jan.). Biological approaches to the diagnosis and treatment of post-traumatic stress disorder. Journal of Traumatic Stress, 4, No. 1, 67-91.

Garvey, M.O. (1989, Feb. 25). On troubled belief. America, p. 164.

Golden, G.K. (1990, Mar.). Attachment--Not dependence. Social Work, 35, No. 2, 101.

Golden, G.K., & Hill, M.A. (1991, Spring). A token of loving: From melancholia to mourning. Clinical Social Work Journal, 19, No. 1, 23-33.

Green, B.L., Wilson, J.P., & Lindy, J.D. (1985). Conceptualizing post-traumatic stress disorder: A psychosocial framework. In C. R. Figley (Ed.). Trauma and its wake: The study of post-traumatic stress disorder (pp. 53-69). New York: Brunner/Mazel.

Helle, R., & Coppin, E. (1985). My war beyond Vietnam. Ventura, CA: Regal Books.

Highlen, P.S., Myers, L.J., Hanley, C.P., Speight, S.L., Reynolds, A.L., Adams, E.M., & Cox, C.I. (1986). Seed grant proposal. Columbus, OH: Ohio State University.

Hobfoll, S.E. (1985). The limitations of social support in the stress process. In I. G. Sarason & B. R. Sarason (Eds.). Social support: Theory, research, and applications. The Hague: Martinus Nijhoff.

Icaza, R.M. (1989). Spirituality of the Mexican American people. Worship, 63, No. 3, 232-246.

International Symposium on Dendritic Cells in Lymphoid Tissues. (1991). Dendritic cells in lymphoid tissues: Proceedings of the first international symposium, Amsterdam, Netherlands. New York: Elsevier.

Ireland, E.C. (1991, May). The role of the Pentecostal Church as a service provider in the Puerto Rican community, Boston, Massachusetts: A case study. Ph.D. dissertation, Brandeis University.

Jacob, M.R. (1987). A pastoral response to the troubled Vietnam Veteran." In T. Williams (Ed.), Post-traumatic stress disorders: A handbook for clinicians (pp. 51-74). Cincinnati, OH: Disabled American Veterans.

Jaffe, R. (1968). Dissociative phenomena in former concentration camp inmates.

International Journal of Psycho-Analysis, 49, 310-312.

Katz, R.L. (1985). Pastoral care and the Jewish tradition: Empathic process and religious counseling. Philadelphia: Fortress Books.

Kimball, W.R. (1988). Vietnam: The other side of glory. New York: Ballantine.

Krell, L.L. (1981). The spiritual dimension of man: Its relationship to physical health status in adults. M.Nurs. thesis, University of Washington.

Kreutzberg, G.W. (Ed.). (1975). Physiology and pathology of dendrites. New York: Raven Press.

Lake, F. (1966). Clinical theology. London: Darton, Longman, & Todd.

Levine, K.G., & Lightburn, A. (1989, May). Belief systems and social work practice. Social casework, 70, No. 3, 139-145.

Liebman, C. (1978). Myth, tradition, and values in Israeli society. Midstream, 24, 44-53.

Liebman, C., & Don-Yehiya, E. (1986). Civil religion in Israel. Berkeley, CA: University of California Press.

Lyons, J.A. (1991, Jan.). Strategies for assessing the potential for positive adjustment following trauma. Journal of Traumatic Stress, 4, No. 1, 93-111.

MacLeish, A. (1976). New and collected poems. 1917-1976. Boston: Houghton Mifflin.

Magnuson, J.W. (1982). Sweat, stones, and visions: Native American spirituality. Christian Century, 99, No. 18, 594-597.

Maloney, G.A. (1979). An earthy spirituality. Diakonia, 14, No. 3, 234-236.

Matheny, M.A. (1984). Self-reported spiritual needs of spinal cord injured persons. M.Nurs. thesis, University of Washington.

May, G.G. (1974, June). The psychodynamics of spirituality. Journal of Pastoral Care, 28, No. 2, 84-91.

May, G.G. (1977, June). The psychodynamics of spirituality: A follow-up. Journal of Pastoral Care, 31, No. 2, 84-90.

May, R. (1991). The cry for myth. New York: W. W. Norton.

McCammon, S., Durham, T.W., Allison, E.J., Jr., & Williamson, J.E. (1988). Emergency workers' cognitive appraisal and coping with traumatic events. Journal of Traumatic Stress, 1, No. 3, 353-372.

Mahedy, W.P. (1986). Out of the night: The spiritual journey of Vietnam vets. New York: Ballantine.

Mitchell, J.T. (1983, Jan.). When disaster strikes...The critical incident

stress debriefing process. Journal of Emergency Medical Services, 13, 47-52.

Moberg, D.O. (1986). Spirituality and science: The progress, problems and promise of scientific research on spiritual well-being. Journal of American Scientific Affiliation, 38, No. 3, 186-194.

Myers, L.J. (1981). Oneness: A Black model of psychological functioning. Denver, CO: Association of Black Psychologists National Convention.

Nicholson, B. (1988, Spr.). Object relations theory revisited: Integrating essential concepts with developmental phase theory. Journal of Independent Social Work, 2, No. 3, 25-38.

O'Connor, J. (1985). Sensuality, spirituality, sacramentality. Union Seminary Quarterly Review, 40, Nos. 1 & 2, 59-70.

O'Donnell, J. (1982). Spirituality: A Roman Catholic perspective. Review and Expositor, 79, No. 2, 293-305.

Parlotz, R.D. (1990a). Trauma pastoral care: An USAF chaplain intervention model for responding to trauma environments. In A. D. Mangelsdorff (Ed.). Proceedings Seventh Users' Workshop on Combat Stress (pp. 48-55). Fort Sam Houston, TX: U.S. Army Health Care Studies and Clinical Investigation Activity, U.S. Army Health Services Command.

Parlotz, R.D. (1991a--in press). Trauma pastoral care: Part 1--An affective-cognitive-spiritual adaptation theory. Military Chaplains' Review.

Parlotz, R.D. (1991b--in press). Trauma pastoral care: Part 2--The intervention model. Military Chaplains' Review.

Parlotz, R.D. (1990b). Trauma pastoral care training for military chaplains. Ann Arbor, MI: University Microfilms International.

Parlotz, R.D. (1991c). Traumatic stress syndromes and the affective, cognitive, and spiritual adaptive domains. Bellevue, WA: Photocopied material by author.

Parlotz, R.D., & Frissell, C.R. (1988a). Trauma pastoral care--Part 1. B. Brown (Dir.). Video cassette. Maxwell Air Force Base, AL: Detachment 3, 1361 Aerospace Audiovisual Services, USAF Air University. 21:00 min.

Parlotz, R.D., & Frissell, C.R. (1988b). Trauma pastoral care--Part 2. B. Brown (Dir.). Video cassette. Maxwell Air Force Base, AL: Detachment 3, 1361 Aerospace Audiovisual Services, USAF Air University. 43:45 min.

Pauck, W., & Pauck, M. (1989). Paul Tillich: His life and thought. San Francisco: Harper & Row.

Pruyser, P.W. (1976). The minister as diagnostician. Philadelphia: Westminster Press.

Raphael, B. (1986). When disaster strikes: How individuals and communities cope with catastrophe. New York: Basic Books.

Raphael, B. (1986). When disaster strikes: How individuals and communities cope with catastrophe. New York: Basic Books.

Renard, J. (1983). The three paradigmatic journeys in Islamic spirituality. Studies in Formative Spirituality, 4, No. 4, 335-350.

Renard, J. (1988). Three visual themes in search of a global spirituality. Studies in Formative Spirituality, 9, No. 2, 193-207.

Roever, D., & Fickett, H. (1986). Welcome home, Davey. Waco, TX: Word Books.

Rosenfeld, A.H. (1980). A double dying: Reflections on Holocaust literature. Bloomington, IN: Indiana University Press.

Rubenstein, R. (1966). After Auschwitz: Radical theology and contemporary Judaism. Indianapolis: Bobbs-Merrill.

Shafranske, E.P., & Gorsuch, R.L. (1984). Factors associated with the perception of spirituality in psychotherapy. Journal of Transpersonal Psychology, 16, 231-241.

Smith, L.E., Jr. (1986). Spirituality and social freedom. Liturgy, 5, No. 3, 47-51.

Solomon, R. (1989). The dynamics of fear in critical incidents. Training Key #399. Arlington, VA: International Association of Chiefs of Police.

Solomon, Z., Benbenishty, R., & Mikulincer, M. (1991, July). The contribution of wartime, pre-war, and post-war factors to self-efficacy: A longitudinal study of combat stress reaction. Journal of Traumatic Stress, 4, No. 3, 345-361.

Squire, A.M. (1978). Women and spirituality. Religious Education, 73, No. 3, 324-335.

Steer, J., & Dudley, C. (1982). Vietnam: Curse or blessing. Green Forest, AK: New Leaf Press.

Suchocki, M.H. (1989). Earthsong, godsong: Women's spirituality. Theology Today, 45, No. 4, 392-402.

Tillich, P. (1955). The new being. New York: Charles Scribner's Sons.

Tillich, P. (1967). Systematic theology, 3 vols. Chicago: University of Chicago Press.

van der Hart, O., Brown, P., & van der Kolk, B.A. (1989). Pierre Janet's treatment of post-traumatic stress. Journal of Traumatic Stress, 2, No. 4, 379-395.

van der Kolk, B.A. (1984). Post-traumatic stress disorder: Psychological and biological sequalae. Washington, DC: American Psychiatric Association.

van der Kolk, B.A. (Ed.). (1986). Psychological trauma. Washington, DC: American Psychiatric Press.

van der Kolk, B.A. (1988). The trauma spectrum: The interaction of biological and social events in the genesis of the trauma response. Journal of Traumatic Stress, 1, No. 3, 273-290.

van der Kolk, B.A., Greenberg, M.S., Boyd, H., & Krystal, J. (1985). Inescapable shock, neurotransmitters and addiction to trauma: Towards a psychobiology of post-traumatic stress. Biological Psychiatry, 20, 314-325.

van der Kolk, B.A., & van der Hart, O. (1989). Pierre Janet and the breakdown of adaptation in psychological trauma. American Journal of Psychiatry, 146, No. 12, 1530-1540.

Vosler, N.R., & Proctor, E.K. (1990, June). Stress and competence as predictors of child behavior problems. Social Work Research and Abstracts, 26, No. 2, 3-9.

Wheeler, J.P. (1982). Theological reflections upon the Vietnam War. Anglican Theological Review, 61, No. 4.

Williams, T. (1987). Diagnosis and treatment of survivor guilt--The bad penny. In T. Williams (Ed.), Post-Traumatic Stress: A Handbook for Clinicians (pp. 75-92). Cincinnati, OH: Disabled American Veterans.

Wilson, J.P. (1989). Trauma, transformation and healing: An integrative approach to theory, research and post-traumatic therapy. New York: Brunner/Mazel.

Worgul, G.S., Jr. (1981). Death, sacraments and Christian spirituality. Studies in Formative Spirituality, 2, No. 2, 231-246.

Wright, K.M., & Ursano, R.J., Bartone, P.T., & Ingraham, L.H. (1990, Jan.). The shared experience of catastrophe: An expanded classification of the disaster community. _American Journal of Orthopsychiatry, 60_, No. 1, 35-42.

Wulf, F. (1969). Merkmale Christlicher spiritualitat heute. _Geist und Leben, 42_, No. 5, 350-358.

York, G.Y. (1989, Fall). Strategies for managing the religious-based denial of rural clients. _Human Services in the Rural Environment, 13_, No. 2, 16-22.

EYE MOVEMENT DESENSITIZATION AND REPROCESSING:
TREATMENT OF CHOICE FOR CRITICAL INCIDENT TRAUMA

Roger M. Solomon, Ph.D.
Washington State Patrol
Olympia, Washington

Eye Movement Desensitization and Reprocessing (EMDR) is a new therapeutic procedure that is effective in treating the traumatic impact of critical incidents. EMDR was developed in 1987 by Francine Shapiro, Ph.D. It was originally introduced as a rapid treatment modality for traumatic memories and anxiety (Shapiro, 1989a,b) but is currently being applied to a wide range of complaints (Shapiro, 1991a). Following a critical incident, EMDR can be effective in reducing physiological tension, reducing traumatic symptomology, and shifting cognitive beliefs.

A controlled study (Shapiro, 1989a) with Vietnam veterans and rape/sexual molestation victims indicated that the procedure is capable of a rapid (e.g., one 45-90 minute session) desensitization of traumatic memories, including a cognitive restructuring and a significant reduction of symptomology (e.g., anxiety, intrusive thoughts, flashbacks, and nightmares). While there has not yet been replication of Dr. Shaprio's studies, research is currently underway at several universities and hospitals and a variety of case studies, soon to be published, have emerged.

In the EMDR treatment, along with reduction in traumatic symptoms, there is an accelerated reprocessing of information that facilitates positive, cognitive reframing of the incident and a shifting of beliefs. For example, the emotional impact of a traumatic incident can be cognitions and feelings of helplessness, vulnerability, lack of control, or self-blame for circumstances or events beyond one's control. EMDR seems to facilitate the perspective that although one may not have been in control, one was not necessarily helpless. Clients come to acknowledge they perhaps did all they could, or the best they could do under the circumstances, or that they were not responsible for the uncontrollable elements or events. Further, EMDR may facilitate the gaining of a sense of distance from the traumatic experience; that is, it is over, in the past, and one has survived. Another common result of EMDR is that intense visual images become smaller, or more distant, or details become less clear, or one sees himself in the situation rather than through his own eyes. Such reprocessing accompanies a reduction in tension and intensity of the experience.

The reprocessing of experience is not limited to the target incident one is working on. As layers of emotion (e.g., guilt, shame, anger, fear) or earlier traumatic experiences unfold during the procedure, they too are reprocessed and desensitized.

The EMDR procedure involves the client and therapist first identifying the experience to be worked on, and assessing the images, the kinesthetic sensations, and cognitive beliefs (including negative self-assessments about the situation) that pertain to the traumatic experience. Positive, adaptive self-assessments are also identified. Next, the traumatic memory is treated by having the client focus on a visual image of the experience and/or the physical sensations that are concomitants of the traumatic response. Simultaneously, the therapist induces a particular variety of multi-saccadic eye movement by

asking the client to follow the repeated bilateral movement of the therapist's finger across the client's visual field. (The reader is directed to Shapiro's article for a further description. However, the reader is strongly cautioned that in order to competently and ethically utilize EMDR, one must have training in the procedure.)

At present, reasons for the effectiveness are only speculative. Shapiro (1991a) suggests that a traumatic incident causes an over-excitation of the neurological system which upsets the excitatory-inhibitory balance in the brain. This interferes with neurological processing of the incident. As a result, the incident remains in its anxiety producing form, and is triggered as intrusive thoughts, flashbacks, nightmares, and other related PTSD symptomology. The rhythmic, multi-saccadic eye movements used in the EMDR procedure are proposed to be a natural inhibitory mechanism, similar to the "rapid eye movement" (REM) dream state of sleep, during which unconscious material surfaces and may be desensitized and integrated. It is suggested that the client simultaneously accessing the traumatic experience while moving his or her eyes in accordance with the EMDR procedure, may restore the excitatory-inhibitory balance. This allows the information processing of the incident to proceed to resolution.

Traditional clinical skills and knowledge of human dynamics are essential to the positive application of EMDR. To utilize the procedure appropriately, the clinician must assist the client in accessing the traumatic memories and defining relevant parts of the experience. The clinician must have the skills to provide the therapeutic direction, framework, and context for treatment to be effective. The procedure is no substitute for establishing rapport, taking a history, giving meaningful interpretation, teaching and providing relevant information, and facilitating ventilation and insight. EMDR is a procedure that augments one's therapeutic armamentarium, not replaces it. EMDR can be interwoven with other clinical procedures (e.g., relaxation training, hypnosis, visualization exercises) and integrated into one's therapeutic orientation.

Further research is needed to validate EMDR and to determine when, where, for whom, and for what EMDR is effective. There are a number of investigations currently being conducted on EMDR around the country by EMDR trained researchers. Although the empirical data is not yet in, there is sufficient anecdotal evidence to suggest that EMDR is producing rapid, positive results that are stable over time.

My experience as a department psychologist, a consultant to many law enforcement agencies, and a consultant to the critical incident program of a major railroad, has given me a large baseline in treating critical incident trauma. I have found the addition of EMDR to be a powerful tool that rapidly and effectively reduces the emotional impact of traumatic situations. I have utilized the procedure with hundreds of people who have experienced traumatic incidents. With the addition of EMDR to my treatment procedures, I find that I can usually accomplish in one to four sessions what used to take three to twelve sessions. Further, I am finding that the addition of EMDR is more effective than just using my traditional procedures. Using pre- and post-administrations of the Impact of Events Scale (Horowitz, 1979) as an outcome measure, I am finding that post-treatment scores are significantly lower for those people who are given EMDR in comparison with those who are not. (This data will be published in the near future.) My experience is that the effects

50

of treatment are stable over time. Below are some examples of how I have utilized EMDR.

EXAMPLE 1: An officer with 3 years experience was referred to me for consistently avoiding high risk calls, or being one of the last to arrive on the scene. The officer always justified his actions with stories of traffic stops or other calls that had to be completed instead of responding immediately to the dangerous call to which he was dispatched. A fitness for duty evaluation by another psychologist revealed the officer was within normal limits of functioning, but needed time to address the issues behind the hesitance. The officer was placed on sick leave.

A history revealed that the hesitancy began 2 years prior, after a situation where the officer almost shot a suspect brandishing a large knife at a family fight. The officer and a back-up officer confronted the armed man. The suspect turned toward the officer and shouted threats. The officer, with his gun drawn, ordered the man to drop his weapon. After a few minutes of dialogue, the man dropped his knife. The back-up officer, an experienced veteran whom this officer looked up to, commented that the officer could have shot this man because he was making threats and was close enough to be a lethal threat. The officer interpreted this comment to mean that the suspect should have been shot and that he failed to perform adequately because he did not shoot. This he generalized to the belief that he would not be able to fire his weapon in the line of duty. Subsequently, each time there was a high risk call the officer was able to find a reason to avoid responding immediately, and he rationalized the legitimacy of these reasons.

EMDR was utilized to desensitize the officer to the incident. After two sessions, the officer realized that there was insufficient reason to shoot and that he had exercised appropriate judgment by not shooting. The officer remembered his on-scene assessment that the suspect was not advancing on him or orienting the knife toward him, and at no time did he feel in lethal jeopardy. Further, the officer felt the dialogue was succeeding, which it eventually did. The officer felt he would have been able to shoot if his life had been placed in direct jeopardy, but that the circumstances did not dictate the use of lethal force. He realized he could trust his judgment and would be able to shoot if the situation warranted. In the following sessions, EMDR was utilized to desensitize past threatening situations that he had avoided and to imagined situations where he felt he would not be able to function. The result was the officer feeling confident in his ability to apply his training and exercise appropriate judgment. The procedure appeared to help the officer have confidence in his ability to respond; that is, it increased his level of positive efficacy.

The officer has returned to work. A one year follow-up showed that the officer has dealt with all of his high risk calls appropriately. He now experiences normal levels of arousal when responding to a high risk call, exercises appropriate safety, and maintains confidence in his ability to respond.

EXAMPLE 2: An officer responded to a multiple casualty accident. Two of the deceased people, who were burned, reminded the officer of two buddies killed during a covert military mission 19 years earlier. The officer, who had never dealt with the incident (and was ordered not to talk about it), now was flooded with intense memories of the combat experience as well as the accident. After

a month of intrusive images and flashbacks of the combat experience, uncontrollable crying, feelings of intense grief, vivid nightmares, active thrashing during sleep which woke up both the client and his wife, he came in for treatment. He had already seen his physician for a medical consultation. EMDR was used to deal with the memories and images of the combat experience and the accident. After three sessions given within a 10-day period, his symptoms subsided. He was sleeping normally with only an occasional dream about the incident, crying spells ceased, he could think about the combat experience and the accident in a controlled manner, and intrusive images significantly dropped in both frequency and intensity. Psychotherapy continued for another month to deal with his grief and further work through his combat experience. A follow-up 5 months later showed treatment gains to be stable.

EXAMPLE 3: A team of two detectives was investigating a horrible incest, ritual abuse case where the perpetrator was a fellow officer with whom they had worked for years. The victims were also known to the detectives. The victims' descriptions of what happened vicariously traumatized the officers. They experienced sleep disorders, nightmares involving their own children/grandchildren being abused, intense anger, and reported they could think of little else but the case. Although these detectives were being routinely debriefed by another experienced police psychologist, symptoms persisted.

For both detectives, one session of EMDR relieved their suffering. The case was still stressful, but they no longer over-identified with it. They reported they felt "separated" from the case, and felt they had some emotional distance. They realized that the victims were not their relatives, which helped them gain a more realistic, less emotional perspective. Follow-up sessions were routinely given through the duration of the case to help them cope with the ongoing investigation.

Cautionary note: It is important that only clinicians who have been trained in EMDR utilize the procedure. Shapiro (1991b) appropriately points out that untrained therapists may put their clients at risk through retraumitization if they attempt to use EMDR. According to Shapiro (1991b), the description of the procedure published in previous studies would not provide sufficient information to enable a clinician to effectively utilize EMDR in cases such as those cited in this article. EMDR is not a simple technique that can be applied the same way to all people. Supervised training is necessary in order to maximize therapeutic efficacy and client safety.

REFERENCES

Horowitz, M., Wilmer, N., and Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. Psychosomatic Medicine, 41.3, 209-218.

Shapiro, F. (1989a). Efficacy of the eye movement desensititation procedure in the treatment of traumatic memories. Journal of Traumatic Stress Studies, 2, 199-223.

Shapiro, F. (1989b). Eye movement desensitization: A new treatment for post-traumatic disorder. Journal of Behavior Therapy and Experimental Psychiatry, 20, 211-217.

Shapiro, F. (1991a, May). Eye movement desensitization and reprocessing procedure: From EMD to EMDR - A new treatment model for anxiety and related traumata. _The Behavior Therapist, 14,_ 133-35.

Shapiro, F. (1991b) September). Eye movement desensitization and reprocessing: A cautionary note. _The Behavior Therapist, 14,_ 188.

ASSESSMENT OF RESILIENCY AND STRATEGIES FOR
DEALING WITH EXPOSURE TO TRAUMATIC STRESS

Dennis M. Kowal, Ph.D.
INSCOM
Lorton, Virginia

The presentation of post traumatic stress symptoms has long been associated with exposure to disaster or war trauma. Mendolson (1987) has nicely chronicled the long evolution of our current understanding of the emotional, behavioral and physical responses secondary to exposure to wars or disaster. Although part of the legacy of the Viet Nam war, post-traumatic stress disorder (PTSD) is not viewed as specific to war. The disorder is recognized as much more pervasive and caused by exposure to human tragedy of any kind. Lessons learned from airline disasters, Jonestown, and other mass casualty events has reinforced the findings that exposure to mutilated and burned bodies by personnel, no matter how experienced, promotes PTSD Symptoms of emotional lability, sleep disturbance, depression, intrusive thoughts, and substance abuse. These responses are the predictable product of a sudden and unexpected traumatic event as well as the personality of the individual and the social context of the event. Figure 1 presents a model that depicts the interaction between these variables and their impact upon the cognitive and emotional processes of the individual. What the clinician should be able to provide at this time is a rapid assessment of the individual's present status and an assessment of the risk of vulnerability. It is then possible to begin the recovery process by providing the subject with some understanding of what will be expected as he or she continues to be exposed to the critical event. The diagnostic criteria outlined in Figure 2 provide a basis for the extent of the individual's vulnerability or risk. However, it should be clear that the purpose is not diagnostic but prescriptive in nature. Unfortunately, traumatic events are so charged with emotional energy that they may initiate long lasting responses that develop a life of their own. They have a way of endlessly replaying themselves, or being reexperienced many times over often, far removed in time from the traumatic event that initiated them. However, in and of themselves, these reactions are "normal responses to abnormal situations or events." Our concern is that the reaction can become a personal tragedy if not dealt with in a manner that emphasizes a positive outcome through immediate, conveniently located treatment. The consequence of not adhering to these principles of treatment is that approximately 20% of the personnel will experience delayed emotional or physical reactions over the next 3-5 years. This intervention is well known to most mental health workers as the basis of combat psychiatry. The responsibility of the clinician at this point is described in Figure 3.

However, another variable that deserves attention is the personality factors that makes one either (vulnerable) reactive to these traumatic events or resistant to them.

The construct of "locus of control" has been investigated in relation to the ability to cope with varying degrees of threat. As formulated by Rotter (1966, 1975), individuals may be classified into one of two types: internalizers or externalizers. A number of correlational studies have been conducted to investigate the moderating effect of locus of control on reactivity to stress. Unfortunately, the results prove to be inconsistent and in some cases represent a paradox.

Another construct that has been investigated regarding its relationship to reactivity to stress is that of "hardiness." Hardiness is quite similar to the construct of "locus of control," and involves the personality characteristics of commitment, need for challenge, and control. Kobasa (1982) showed that hardiness was an effective moderator of stressful life events and the development of somatic illness. However, it does not explain how some people with high hardiness but lacking social support demonstrated higher levels of illness symptomology.

The literature that has been discussed so far leads us to conclude that the behavior is the result of an interaction between a number of environmental, social, and personality forces and that discrepancies in an individual's behavior to a life trauma is not inconsistent as much as a product of a complex interaction of variables that is different for each individual.

Therefore, without a model to consider this interaction and predict coping style of an individual, we can never appreciate nor predict the outcome behavior. Using this conceptual framework allows us to predict the response to crisis and, more importantly, why some people are more resilient to crises than others.

In summary, the probability of a post trauma reaction is not only a function of the event but the individual's personal reactivity, his or her prior experience or exposure and perceived role, as well as, the support system available at the time of the event. It is the summation of these factors that determines the individual's ability to manage the crisis experience and maintain control of emotional resources. But a word of caution is in order. Everyone has their limit and limits of exposure must be set if we expect to keep our service personnel effective. I would like to emphasize that this assessment must be proactive in nature, since once the symptoms develop the recovery process is protracted. We must not be assuaged by the facade of composure that many of these individuals are capable of displaying, it is done for your benefit, since these individuals see this as their most important purpose in life and would rather suffer than admit loss of control. Figure 4 sums up the inherent fallacy in believing that individuals are capable of rationalizing or controlling all of their feelings.

REFERENCES

Kobasa, Suzanne C. (1982). Hardiness and health: A prospective study. _Journal of Personality and Social Psychology._ 42, 1, 168-177.

Rotter, J. B. (1966). Generalized expectations for internal versus external control of reinforcement. _Psychological Monographs: General and Applied,_ 80, 1, 1-28.

Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. _Journal of Consulting and Clinical Psychiatry._ 43, 1, 56-67.

FIGURE 1

DIAGNOSTIC CRITERIA FOR DETERMINING POST-TRAUMATIC STRESS DISORDER (PTSD)

- EXPERIENCE OF AN EVENT OUTSIDE THE RAGE OF NORMAL EVENTS THAT WOULD DISTRESS MOST OF US

- EVENT IS RE-EXPERIENCED PERSISTENTLY AS...

  - RECURRENT INTRUSIVE RECALL

  - RECURRENT DISTRESSING DREAMS

  - SUDDEN FEELING OR ACTING AS IF EVENT IS RECURRING

  - INTENSE DISTRESS TO EVENTS THAT RESEMBLE OR SYMBOLIZE THE TRAUMATIC EVENT

- PERSISTENT AVOIDANCE OF STIMULI ASSOCIATED WITH TRAUMA

- PERSISTENT SYMPTOMS OF INCREASED AROUSAL

- DURATION OF THE ABOVE SYMPTOMS OF AT LEAST ONE MONTH
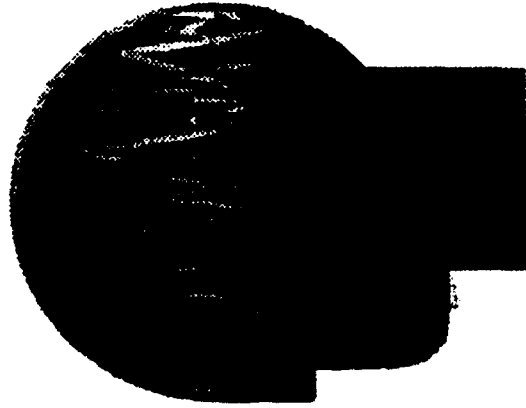
FIGURE 2

MODEL OF RESPONSE TO CRITICAL INCIDENT

BEHAVIOR OR STRESS RESPONSE
- GROWTH
- PATHOLOGY
- FUTURE RISK

PERSONALITY STRUCTURE
- TRAITS
- STATES
- SKILLS

COGNITIVE PROCESSES AFFECTIVE

SUPPORT STRUCTURE
- SOCIAL
- ENVIRONMENTAL
- ORGANIZATIONAL
- FAMILY

CRITICAL INCIDENT EXPERIENCE
- RISK
- WARNING
- ROLE
- PRIOR EXPOSURE
- INVOLVEMENT

FIGURE 3
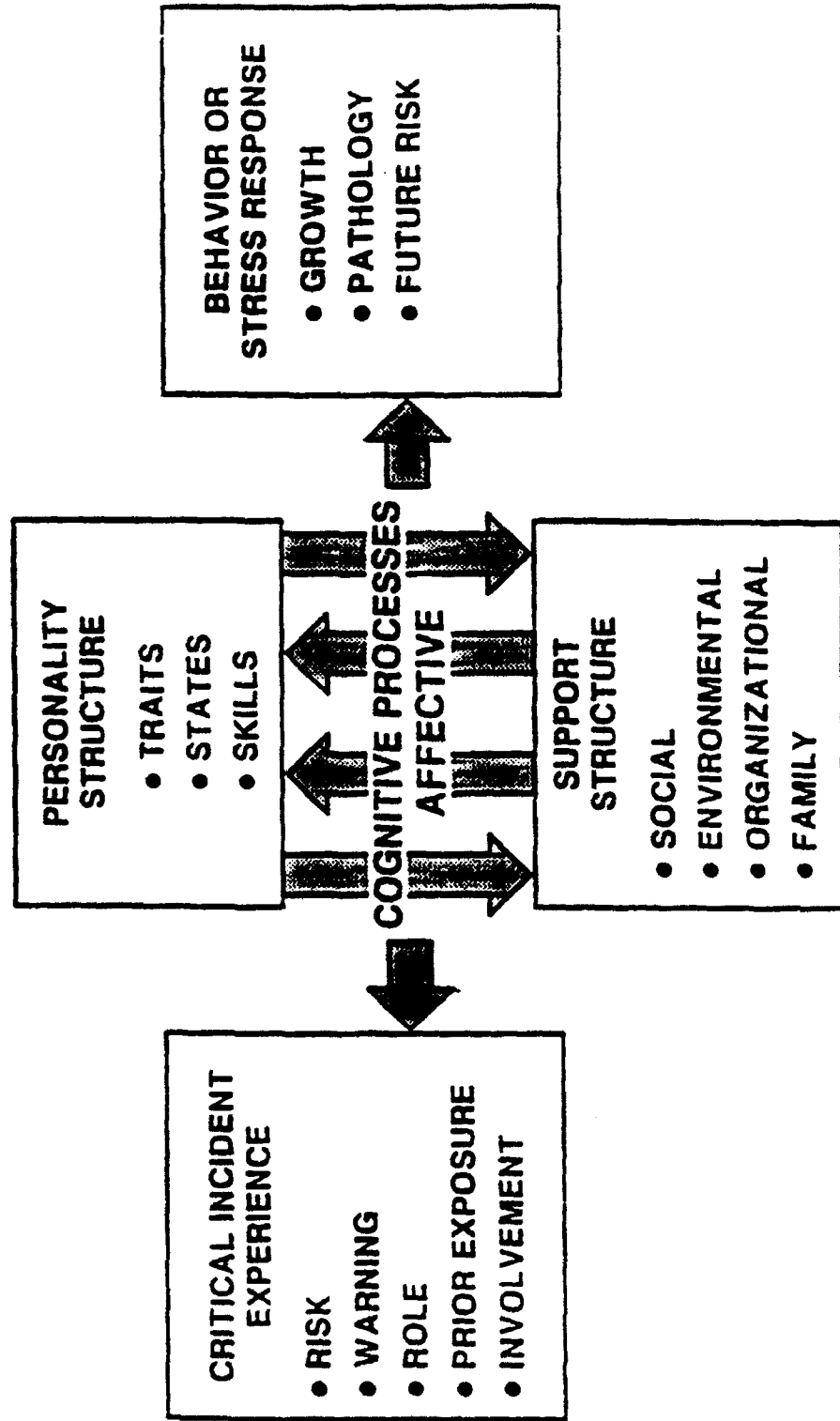
THERAPIST TASKS WITH PTSD PATIENTS

1. DIFFERENTIATE PTSD FROM CHARACTER PATHOLOGY OR OTHER AXIS I DIAGNOSES THROUGH LOGITUDNAL HISTORY

2. DETECT UNCONCIOUS REENACTMENTS OF TRAUMATIC EVENTS

3. DISPLAY EMPATHETIC EXPERIENCING OF THE TRAUMAS. SHOW EASE WITH PATIENT'S INTENSE AFFECT

4. MAINTAIN A SILENCE WHICH IS COMFORTABLE WITH THE PATIENT

5. DISCOVER THE PATIENT'S INNER TIMETABLE FOR RECOVERY

6. WORK THROUGH THE TRAUMATIC MEMORIES

7. HELP THE PATIENT FIND A SURVIVOR MISSION - A NEW MEANING TO LIFE

8. HELP THE PATIENT OVERCOME FUNCTIONAL IMPAIRMENT

9. HELP THE PATIENT RESOLVE CONFLICTS ABOUT THE EXPERIENCE ITSELF
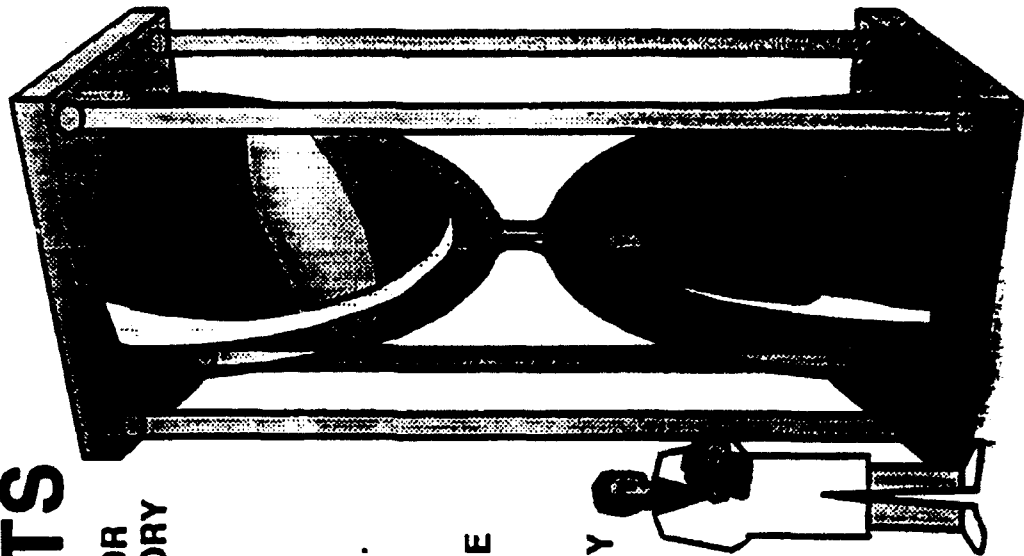
FIGURE 4

STRESS AND READJUSTMENT PARAMETERS IN WOMEN VETERANS

Jessica Wolfe, Ph.D.
National Center for PTSD, Department of Veterans Affairs
Boston, Massachusetts

Prior research has demonstrated the importance of stressor measurement as a component of evaluating post-traumatic stress disorder (Card, 1987; Keane et al., 1989; Kulka et al., 1988). Most work conducted in this area has focused on male combat veterans, resulting in the development of various combat exposure scales (cf. Watson, Juba, & Anderson, 1989). The nature of war-zone exposure and other factors influencing post-war adjustment in women, however, have not been systematically addressed. This paper reports on two projects: (a) the development and preliminary psychometric analyses of the Women's War-Time Exposure Scale (WWES; Wolfe, Furey, & Sandecki, 1989)--an instrument designed to measure the self-report of war-time stressors encountered by women military personnel and female civilians who served during the Vietnam era and (b) the evaluation of health status in women Vietnam veterans and the association of physical well-being with psychological stress and war trauma. Descriptive and empirical data from two studies are described.

DEVELOPMENT OF A WAR-ZONE EXPOSURE SCALE FOR WOMEN

Within the past decade, attention has begun to focus on the war-time experiences of female Vietnam veterans (e.g., Van Devanter, 1983). The role of exposure to war-time stress and the development of subsequent psychological problems such as post-traumatic stress disorder (PTSD) have been of particular interest (Wolfe & Keane, in press). Despite the prevalence of descriptive data (e.g., Kirk, 1965; Martin, 1967; McVicker, 1985; Paul, 1985), only a few empirical studies have been conducted to measure the quantitative impact of war on women. For example, Schnaier (1986) conducted a survey of 89 female Vietnam theater veterans and found that certain nursing responsibilities, chronic supply shortages, viewing a continual stream of casualties, witnessing mutilated bodies, and the need to negate personal emotions constituted severe stressors. Furthermore, women veterans who encountered greater levels of stressors in Vietnam were significantly more likely to report the subsequent occurrence of stress-related symptoms. More recently, the National Vietnam Veterans Readjustment Survey (NVVRS; Kulka et al., 1988) examined exposure to war-zone stress in a sample of 296 women veterans. However, because the vast majority of veterans serving in Vietnam were male, the scale's construction focused largely on combat experiences. Nonetheless, the study yielded two important findings in terms of women: (a) female military personnel suffered high rates of war-related PTSD and (b) similar to their male counterparts, women with high war-zone exposure were at significantly greater risk for PTSD than those with low or moderate levels of exposure.

Although a strong link between war-time exposure and the presence of PTSD symptomatology has been established, the development of empirically-derived scales comprehensively addressing the distinctive experiences of women veterans have been lacking. This paper presents data on the development and preliminary analyses of a self-report scale designed to measure war-time stressors in women veterans and civilians who served in a war zone during the Vietnam War. Certain preliminary investigations of the scale's psychometric properties, specifically internal consistency and factor structure, are presented along

with data reflecting differences in exposure scores between women theater veterans, women era veterans and female American civilians who served in the Vietnam theater. Subjects included 133 female participants: 98 Vietnam theater veterans, 19 era veterans, and 16 incountry civilians. Age ranged from 38 to 75 with a mean age of 47.2 (SD = 6.8). Educational and vocational levels were comparable among the three groups. Subjects were contacted by mail and completed several instruments including the Women's War-Time Exposure Scale (WWES; Wolfe, Furey, & Sandecki, 1989); an extensive demographic questionnaire covering premilitary, military, and postmilitary functioning; and a series of tests measuring psychological adjustment and symptomatology. The WWES is a Likert-type scale consisting of 27 statements of exposure to specific stressors; total scores range from 0 to 108. Derivation of the scale was based in part on previously reported interview items (cf. Schnaier, 1986; Kulka et al., 1988) and existing anecdotal and descriptive literature (cf. McVicker, 1983; Van Devanter, 1985). Direct input on item content and wording was also obtained from a number of women Vietnam veterans and civilians from that era. To retain consistency with male combat exposure scales, WWES items reflected actual events or experiences rather than feelings or attributions about the incidences.

A series of statistical procedures indicated good internal consistency for the WWES, with a coefficient alpha of .89. The average item-total score correlation was .47 (range = .21 - .66). A principal components analysis with a varimax rotation of eigenvalues greater than 1.0 resulted in four factors accounting for 52.7 percent of the common variance. The first factor dealt with horrific environmental or working conditions, the second related to discriminatory experiences being a woman and/or minority in the military, the third addressed the quality of care provided or observed during wartime, and the fourth factor represented end-of-life events, that is, situations specifically involving exposure to, and decision-making surrounding, the dying and dead. Coefficient alphas were .80, .79, .77, and .65, respectively. Factor scores were then computed for each dimension using Gorsuch's (1974) approximation procedure.

A one-way analysis of variance (ANOVA) using WWES total scores as the dependent variable revealed significant differences between the three groups (F (2, 130) = 10.47, p < .0001). As predicted, female theater veterans had significantly higher exposure scores overall than both female incountry civilians (t (112) = 2.50, p < .01) and era veterans (t (115) = 4.06, p < .001). To determine whether there were differences between the three groups on the four factors, a multivariate analysis of variance was conducted (F (8, 256) = 10.80, p < .001). Univariate analyses revealed significant differences between the three groups for Factor 1 (F (2, 130) = 36.37, p < .001), Factor 3 (F (2, 130) = 7.59, p < .001), and Factor 4 (F (2, 130) = 12.47, dp < .001). For Factor 1, Scheffe's post-hoc tests indicated that theater veterans scored higher than incountry civilians who, in turn, scored higher than era veterans (p < .05). For Factor 3 and Factor 4, theater veterans were found to have higher scores than both incountry civilians and era veterans (p < .05).

In conclusion, this study shows that war-zone exposure can be quantitatively assessed in women and that differences may exist as a function of women's war-time roles and assignments. Furthermore, analyses of the WWES suggest that war-zone exposure in females is comprised of several components ranging from job-related functions to interpersonal elements involving

62

discrimination and harassment. The ability to delineate these components on a systematic basis is likely to increase accuracy in assessing the magnitude and scope of PTSD and related disorders in females serving during war-time. Furthermore, these findings point to the importance of studying quantitative and qualitative parameters of stressor exposure, especially for those populations which have been historically overlooked.

REFERENCES

Card, J. (1987). Epidemiology of PTSD in a national cohort of Vietnam veterans. Journal of Clinical Psychology, 43, 6-17.

Gorsuch, R.L. (1974). Factor analysis. Philadelphia: W. B. Saunders Company.

Keane, T.M., Fairbank, J.A., Caddell, J.M., Zimering, R.T., Taylor, K.L., & Mora, C.A. (1989). Clinical evaluation of a measure to assess combat exposure. Psychological Assessment, 1, 53-55.

Kirk, D. (1965). It was 2:00 a.m. Saigon time. American Journal of Nursing, 65, 77-79.

Kulka, R.A., Schlenger, W.E., Fairbank, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R., & Weiss, D.S. (1988). National Vietnam veterans readjustment study advance data report: Preliminary findings from the national survey of the Vietnam generation. Executive Summary. Washington, DC: Veterans Administration.

Martin, L.G. (1967). Angels of Vietnam. Today's Health, 45, .7-22.

McVicker, S.J. (1985). Invisible veterans: The women who served in Vietnam. Journal of Psychosocial Nursing, 10, 13-19.

Paul, E.A. (1985). Wounded healers: A summary of the Vietnam nurse veteran project. Military Medicine, 150, 571-576.

Schnaier, J.A. (1986). A study of women Vietnam veterans and their mental health adjustment. In C. R. Figley (Ed.), Trauma and its wake: Vol. II. Traumatic stress, theory, research, and intervention (pp. 97-119). New York: Brunner/Mazel.

Van Devanter, L. (1983). Home before morning: The story of an Army nurse in Vietnam. New York: Beauford Books, Inc.

Watson, C.G., Juba, M.P., & Anderson, P.E.D. (1989). Validities of five combat scales: Psychological assessment. Journal of Consulting and Clinical Psychology, 1, 98-102.

Wolfe, J., Furey, J., & Sandecki, R. (1989). Women's war-time exposure scale. (Available from Dr. Jessica Wolfe, National Center for PTSD (116B), Boston VA Medical Center, 150 S. Huntington Ave., Boston, MA 02130).

Wolfe, J., & Keane, T.M. (in press). New perspectives in the assessment of combat-related post-traumatic stress disorder. In J. P. Wilson, & B. Raphael (Eds.), The international handbook of traumatic stress syndromes. New York: Plenum Press.

COMPONENTS OF HEALTH FUNCTIONING IN WOMEN VIETNAM VETERANS

The health status of women veterans has begun to receive increasing attention (Dvoredsky & Cooley, 1985; Kulka et al., 1988; 1990; Schnaier, 1986). Research from the Vietnam War suggests that women veterans with high war-zone exposure have significantly more health-related problems than veterans with lower exposure (Kulka et al., 1988; 1990; Schnaier, 1986). In addition, lifetime use of health care differs significantly between the two groups: Females with high war-zone exposure utilize outpatient medical services at a rate 50% greater than cohorts with low exposure, a finding similar to that of male Vietnam combatants (Kulka et al., 1988; 1990).

Despite interest in the issue of health impairment, only a few studies have investigated the medical problems that specifically contribute to reported health problems in women veterans (cf. Baker, Menard, and Johns, 1989). Furthermore, most studies have not systematically assessed the breadth of war-zone exposure in female personnel. This paper presents preliminary data on the relationship between war-zone exposure, PTSD symptomatology, and scope of self-reported health problems in female veterans. Women were surveyed for three time periods: before, during, and after military service in Vietnam. They were asked to rate their health status at these points and to identify the types of medical problems they had experienced. Participants also completed a series of psychometric measures to comprehensively assess war-zone exposure in females (Wolfe, Furey, & Sandecki, 1989) and certain dimensions of psychological distress.

Participants included 113 female Vietnam theater veterans. Subjects ranged in age from 42 to 72 years, with a mean age of 49 (SD = 6.7). Mean number of months served in Vietnam was 12.1 (SD = 3.0). All subjects completed the Women's War-Time Exposure Scale (WWES; Wolfe, Furey, & Sandecki, 1989), a self-report scale is designed to measure women veterans' exposure to war-time stressors; the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1977), a 90-item self-report psychological symptom inventory; the Revised Mississippi Scale for PTSD, a variation of the 35-item self-report scale used to detect PTSD symptomatology in male veterans (Keane, Caddell, & Taylor, 1988); and the Women's Background Questionnaire, a self-report questionnaire covering a variety of premilitary, military, and postmilitary demographic information.

In the medical background section of the Women's Background Questionnaire, women were instructed to rate their physical/medical health status for the following four time periods: pre-Vietnam, during the war, post-Vietnam, and currently. Ratings were made on a 5-point scale ranging from 1 ("poor") to 5 ("excellent"). In addition, respondents were asked to indicate whether or not they currently suffered from any of the following nine health problems: skin problems; heart or cardiovascular problems; stomach or intestinal problems; lung or respiratory problems; gynecological problems; eyes, ears, nose or throat problems; unusual weight changes; pain or tingling in hands, feet, legs, etc.; and liver problems.

On the basis of WWES total scores, women were then divided into low war-zone (n = 57) and high war-zone (n = 56) classifications. Comparisons of the two exposure groups revealed that they did not significantly differ on any of the relevant demographic variables with the exception of age, where the low exposure sample was significantly older (M = 50.4) than the high exposure group (M = 47.6)(t (111) = 2.28, p < .05).

64

Independent t-tests were conducted to compare both the number of reported physical complaints and mean SCL-90-R somatization symptom dimension scores for women with high versus low war-zone exposure. To assess potential group differences in endorsement of specific physical ailments, a series of chi-square analyses was carried out. A repeated measures analysis of variance (ANOVA) and trend analysis were then conducted to determine whether perceived health status differed across time for the two exposure groups. Significance level for all tests was set at $p < .05$. To assess the relationship of PTSD symptomatology to health status, a series of correlations was conducted between Mississippi scores and (a) the number of self-reported health problems and (b) individual health complaints.

Consistent with previous reports, findings revealed that female veterans with high war-zone exposure had a significantly greater number of current physical complaints than did their cohorts with low war-zone exposure (t (111) = 3.82, $p < .001$). An examination of these complaints indicated that a significantly greater percentage of high war-zone than low war-zone exposed women reported the following: skin problems, stomach problems, unusual weight changes, and pain/tingling in the hands, feet, legs, etc. Compared to the low exposed group, women with high exposure also reported greater somatic distress as evidenced by higher SCL-90-R somatization scores (t (107) = 4.09, $p < .001$).

To determine whether the two exposure groups differed in their perceived health status across the following four time periods--before Vietnam, during Vietnam, after Vietnam, and currently--a repeated measures ANOVA was conducted (F (3, 108) = 11.11, $p < .001$). Subsequent trend analyses revealed a significant linear interaction effect (F (1, 110) = 18.954, $p < .001$). Although the two groups did not significantly differ in reports of premorbid health, the high exposure group perceived their health status to have declined more markedly over the years.

A significant correlation was found between PTSD symptomatology (as measured by the revised Mississippi Scale for PTSD) and number of self-reported physical health problems (r = .52, $p < .001$). A series of point biserial correlations was calculated for each specific health problem and corresponding Mississippi total scores. Analyses showed that Mississippi scores correlated with the report of skin problems (r = .40, $p < .001$); stomach problems (r = .43, $p < .001$); pain/tingling in extremities (r = .44, $p < .001$); and gynecological problems (r = .35, $p < .001$).

Overall, these findings suggest that women with high levels of war-zone exposure experience more medical problems, have more somatic distress, and perceive a significantly greater deterioration in their health status since Vietnam than cohorts with substantially less wartime stressor exposure. PTSD symptomatology, frequently correlated with veterans' war-zone exposure in general, also evidenced a strong association with the perception of current health problems. These data are consistent with studies in male Vietnam veterans which have shown that soldiers with high combat exposure report significantly greater health impairment than those with low war-zone exposure (Kulka et al., 1988; 1990; Litz, Keane, Fisher, Marx, & Monaco, in press). Although causality cannot be inferred on the basis of these findings to date, data nonetheless suggest that veterans' health status may be influenced by a variety of broad-ranging factors, from environmental effects (e.g., exposure to

airborne toxins) to psychological variables (self-report bias; perceived distress).

Detection of health impairment in veterans is also likely to be influenced by other factors than those described, including difficulty in demonstrating more subtle types of physical or health impairment. For example, recent research in male veterans with PTSD has shown alterations on specialized tests of autonomic reactivity and effort tolerance despite a corresponding failure to document formal medical problems in the context of traditional medical examinations (Litz et al., in press; Shalev, Bleich, & Ursano, 1990). Thus, levels and types of veterans' health problems in male military personnel are likely to require extensive and careful diagnostic analysis for the full range of physical functioning to be elucidated. As with male veterans, additional research is now needed to explore the spectrum of physical and psychological factors potentially associated with health alterations in female veterans.

REFERENCES

Baker, R.R., Menard, S.W., & Johns, L.A. (1989). The military nurse experience in Vietnam: Stress and impact. Journal of Clinical Psychology, 45, 736-744.

Blake, D.D., Keane, T.M., Wine, P.R., Mora, C., Taylor, K.L., & Lyons, J.A. (1990). Prevalence of PTSD symptoms in combat veterans seeking medical treatment. Journal of Traumatic Stress, 3, 15-27.

Derogatis, L.R. (1977). SCL-90-R: Administration, scoring, and procedures manual. Baltimore: Clinical Psychometrics Research.

Dvoredsky, A.E., & Cooley, W. (1985). The health care need of women veterans. Hospital and Community Psychiatry, 36, 1098-1102.

Keane, T.M., Caddell, J.M., & Taylor, K.L. (1988). Mississippi scale for combat-related post-traumatic stress disorder: Three studies in reliability and validity. Journal of Consulting and Clinical Psychology, 56, 85-90.

Kulka, R.A., Schlenger, W.E., Fairbank, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R., & Weiss, D.S. (1988). National Vietnam veterans readjustment study advance data report: Preliminary findings from the national survey of the Vietnam generation. Executive Summary. Washington, DC: Veterans Administration.

Kulka, R.A., Schlenger, W.E., Fairbank, J.A., Hough, R.L., Jordan, B.K., Marmar, C.R., & Weiss, D.S. (1990). Trauma and the Vietnam war generation. New York: Brunner/Mazel.

Litz, B.T., Keane, T.M., Fisher, L., Marx, B., & Monaco, V. (in press). Physical health complaints in combat-related post-traumatic stress disorder: A preliminary report. Journal of Traumatic Stress.

Paul, E.A. (1985). Wounded healers: A summary of the Vietnam nurse veteran project. Military Medicine, 150, 571-576.

Schnaier, J.A. (1986). A study of women Vietnam veterans and their mental health adjustment. In C. R. Figley (Ed.), Trauma and its wake: Vol. II. Traumatic stress, theory, research, and intervention (pp. 97-119). New York: Brunner/Mazel.

Shalev, A., Bleich, A., & Ursano, R.J. (1990). Post-traumatic stress disorder: Somatic comorbidity and effort tolerance. Psychomatics, 31, 197-203.

Wolfe, J., Furey, J., & Sandecki, R. (1989). Women's war-time exposure scale. (Available from Dr. Jessica Wolfe, National Center for PTSD (116B), Boston VA Medical Center, 150 S. Huntington Ave., Boston, MA 02130).

JOURNEY INTO CONSCIOUS MANHOOD: EXPLORING MEN'S ISSUES

Gary G. John, Ed.D.
Richland College

The concept we have created for this purpose--and it is the pivotal concept in our entire work--is the individual life structure. By "life structure" we mean the underlying pattern or design of a person's life at a given time. Here we were studying the lives of men. A man's life has many components: his occupation, his love relationships, his marriage and family, his relation to himself, his use of solitude, his roles in various social contexts--all the relationships with individuals, groups, and institutions that have significance for him. His personality influences, and is influenced by, his involvement in each of them. We must start, however, with the overall life structure.

Once the character of the individual's life has been identified, we can study in more detail the changes in personality, in the marital and occupational careers, and in other components of life.

THE NEED FOR A WAY TO INTEGRATE ALL COMPONENTS OF LIFE STRUCTURE

The various professions and scientific disciplines often focus on one component of life to the relative exclusion of the others. For example, a good deal of research and counseling has been devoted to occupational careers. Investigators acknowledge that a man's career is influenced by other factors. In general, however, they tend to ignore the non-occupational components. They have had no theoretical framework within which to inter-relate the various components.

THE REAL CRISIS OF ADULT LIFE IS TRANSFORMATION

Every life structure provides diverse gains and costs for the man himself, for others, and for society. The elements that constitute its great strengths are also sources of weakness and take their toll. A structure is never all of a piece. It contains some mixture of order and disorder, unity and diversity, integration and fragmentation. It is always flawed in some respects. It contains contradictions and gaps which can be modified only by basic changes in the structure itself.

No matter how satisfactory a structure is, in time its utility declines and its flaws generate conflict that leads to its modification or transformation. The once stable structure passes into a new transitional period. The seasons change. The pattern of adult development continues.

While some life structures are more satisfactory than others, no structure is without flaws and contradictions. Even the best structure has its limitations and must in time be changed.

THE DREAM

A couple can form a lasting relationship that furthers a man's development only if it also furthers the woman's. Each must have some concept of a dream. Both dreams serve as a vehicle for defining and pursuing their interests.

Acknowledging and managing the disparities between their dreams is a crucial problem in the relationships between lovers and spouses. It is hard enough to form a life structure around one person's dream; building a structure that can contain the dreams of both partners is a heroic task indeed, and is one for which evolution and history have ill prepared us.

THE ORGANIC WHOLE

The life cycle is an organic whole and each period contains all the others. The developing individual is like a long-distance traveler: from time-to-time he changes vehicles, fellow passengers, and baggage of all kinds, but the past does not simply disappear. He is now engaged not only with this current locale but with the various worlds he has lived in and the worlds he is moving toward. THE PAST AND THE FUTURE ARE IN THE PRESENT.

THE PRESENT IS THE MOST IMPORTANT PERIOD TO EXAMINE

Entry into a new period often reactivates the unresolved problems and deficits of previous periods. These problems form a "baggage from the past" that makes it harder to deal with current tasks. The carryover of past conflicts and hurts may weigh so heavily that present tasks are over-shadowed. WHEN A PERSON IS HAVING SERIOUS DIFFICULTIES, IT IS IMPORTANT TO EXAMINE FIRST THE LIFE STRUCTURE, TASKS, AND CONCERNS OF THE ON-GOING PERIOD.

THREE SETS OF TASKS MUST BE ACCOMPLISHED IN ADULT DEVELOPMENT

#1 BUILD IT.   Build a life structure and enhance one's life within it.

#2 MODIFY IT.   Form and modify single components of the life structure.

#3 LIVE IN IT. Live in the life structure you have built and modified.

SECURITY IS PROVIDED BY THE LIFE STRUCTURE IMAGE

What does it mean to have security? Most people would say it means being sure of the love, loyalty, or protection of someone else. More precisely, it means have a workable mental and emotional structure—that is, a set of patterns of action and thinking that gives us the sense of being grounded in, and sheltered by, a familiar and comprehensible reality. We need to live in some kind of reality structure. When we grow, we wander in an uncharted area. But if we wander long enough, we begin creating a new structure. (Gould, Growth and Change in Adult Life)

ADAPTATION TO LIFE

In observing 35 years of men's lives, what are the principal lessons that I wish to pass on? My first conclusion is that isolated traumatic events rarely mold individual lives. That is not to say that the premature death of a parent, the unexpected award of a scholarship, the chance first encounter with a future spouse, or a debilitating heart attack will not result in a sudden change in life trajectory. Unexpected events affect our lives, just as a wrong or a fortuitous turn might affect a cross-country journey. But the quality of the whole journey is seldom changed by a single turning. The life circumstances that truly impinge upon health, the circumstances that facilitate adaptation or stunt later growth—in contrast to fame—are not

isolated events. WHAT MAKES OR BREAKS OUR LUCK SEEMS TO BE THE CONTINUED INTER-ACTION BETWEEN OUR CHOICE OF ADAPTIVE MECHANISM AND OUR SUSTAINED RELATIONSHIP WITH OTHER PEOPLE. (Vaillant, Adaptation to Life)

CURRENT REFERENCES ON MEN'S ISSUES

Books

Bly, R. (1990). Iron John. Redding, MA: Addison Wesley.

Made the bestseller list. Very good source for masculine roles and Bly has a lot to say about men's development using poetry, myth, and fairy tales to do so.

Farrell, W. (1988). Why men are the way they are. New York: Berkeley Publishing Group.

This book looks at all types of current magazines, and shows how men and women develop attitudes and values that are different.

Gerzon, M. (1984). A choice of heroes: The changing face of American manhood. Boston: Houghton-Mifflin.

This book describes the Frontiersman, Soldier, Breadwinner, Expert, and Lord as roles that men learn to play.

Goldberg, H. (1976). The hazards of being male. New York: NAL-Dutton.

Goldberg, H. (1979). New male. New York: NAL-Dutton.

Goldberg, H. (1987). Inner male. New York: NAL-Dutton.

These three make up a good discussion of male development today.

Keen, S. (1991). Fire in the belly. New York: Bantam.

This book really deals with what it means to be a man today; if you only read one book read this one!

Lee, J. (1989). The flying boy: Healing the wounded man. Deerfield Beach, FL: Health Communications.

John Lee started the Austin Men's Center and has been a very powerful influence on men's development--especially for men who have had relationship, alcohol, or drug problems.

Lee, J. (1989). I don't want to be alone. Austin, TX: New Men's Press.

See above information concerning this author.

Lee, J. (1990). Recovery plain and simple: Co-dependency and adult children. Deerfield Beach, FL: Health Communications.

See above information regarding this author.

Levinson, D.J. (1986). <u>The seasons of a man's life</u>. New York: Balanpine.

This ground-breaking study of male adult development is a classic work well worth reading.

Moore, R., & Gillette, D. (1990). <u>King, warrior, magician, lover</u>. San Francisco: Harper.

This work deals with rediscovering the archetypes of the mature masculine nature (I added the word "nature") and is also valuable for presenting the immature patterns--Divine Child, Oedipal Child, Precocious Child, and Hero.

Osherson, S. (1986). <u>Finding our fathers</u>. New York: Free Press.

This book really looks at how a man's life is shaped by his relationship with his father.

<u>Magazines</u>
<u>Man: Men's Issues, Relationships and Recovery</u>. 1611 W. 6th St., Austin, TX 78703.

<u>Wingspan: Journal of the Male Spirit</u>. Box 1491, Manchester, MA 01944.

EXPERT DECISION MAKING UNDER STRESS

George L. Kaempf, Ph.D.
Laura G. Militello
Klein Associates Inc.
Fairborn, Ohio

Early research in decision making began by trying to filter out all the circumstances surrounding a decision so that the decision itself could be studied. College students were given novel tasks in a laboratory environment to see how they make decisions. From this research evolved classical decision theory. Classical decision theory depicts people as irrational, biased decision makers, inferior to computers in nearly every decision-making situation. Until recently, researchers have concentrated on the idea that people would make better decisions if they could be taught more analytical decision strategies.

Classical decision strategies such as Multi-Attribute Utility Analysis (MAUA) (von Winterfeldt & Edwards, 1986; Janis & Mann, 1977) recommend that people array all the options available with common evaluation dimensions, and rate each option on each dimension. The importance of each evaluation dimension should also be weighted, so that the final score for each option takes everything into account. These final scores are tabulated, and the option with the highest score is identified as the best option.

This sort of strategy may be appropriate for some settings, such as ordering inventory for an office supply store. The person in charge of keeping track of inventory would do well to array all the options in a category such as potential suppliers, and identify common evaluation dimensions such as price, products available, delivery time, reliability, etc. It would make sense to rate each option on each dimension and then weight the importance of each dimension.

While this strategy would be useful in such a setting, there are many situations where it is simply not feasible. People are rarely in a circumstance where all the options can be laid out and examined across all pertinent dimensions. Most decisions are made when all the information is not available. Often, time pressure makes any sort of analysis impractical. Many times people must make decisions under rapidly changing conditions. By trying to train experienced decision makers to use analytical strategies in all situations, we run the risk of degrading their ability to make use of their own experience.

Recently, cognitive psychology has seen the development of new models for understanding how people make decisions in real-world settings. Naturalistic decision making is an attempt to understand how humans actually make decisions in complex real-world settings such as firefighting, air traffic control, critical care nursing, and battle command (Klein, Orasanu, Calderwood, & Zsambok, in press). This work has focused on situations marked by dynamic and continually changing conditions, ill-defined tasks, time pressure, and significant personal consequences for mistakes. There is a growing body of research that describes how experienced decision makers react to these situations.

Researchers are developing models that describe how experienced decision makers actually function. Models such as Elimination-By-Aspects (Tversky, 1972), Search for Dominance Structure (Montgomery, 1989), and Recognition-Primed Decision (RPD) (Klein, 1989) strategy are now used to better understand what factors and strategies go into a decision.

Elimination-By-Aspects is a way of quickly arriving at a decision, by first evaluating all options on the most important dimension, then discarding the options that fail to meet a threshold criterion value. A second most important dimension is then identified, options are discarded if they do not meet the new threshold criterion value, and so forth, until only one option is left. Consider a pilot running short of fuel. The pilot may feel it is necessary to land at an airport within 100 miles, which rules out certain options. S/he may acknowledge the need for a large runway to set the airliner down, which rules out other options. The pilot may want certain types of emergency equipment available, and that may settle the choice altogether. This is Elimination-By-Aspects at its best.

Search for Dominance Structure (Montgomery, 1989) suggests that when faced with a difficult choice, people may try to re-examine the situation to ask what the key differences are between the leading alternatives. They then sharpen these differences to see if they can find a way to justify one of the candidates. Goals and values may be adjusted and incidental benefits may be factored in as the person attempts to find a structure that justifies one alternative dominating the other.

Montgomery describes decision making as the process of finding a good argument for acting in a certain way, first by a quick selection of a promising alternative and then by testing or ensuring the dominance of this alternative. Why do people make decisions this way? According to Montgomery the search for dominance structure has two advantages. First, it is compatible with the limited capacity of humans to process information; focusing on a limited number of alternatives and attributes and accentuating the differences between them makes it easy to identify the preferred alternative with no further calculations. Second, and more importantly, the availability of a dominant alternative helps decision makers to persist in its implementation. Thus, the search for dominant structure is particularly suitable in realistic settings where changing circumstances, conflicting or ambiguous goals and the presence of competing interests in and out of one's organization continuously challenge the accomplishment of difficult goals.

The Recognition-Primed Decision (RPD) model describes how experienced decision makers can function under extreme time pressure. Experience allows people to rapidly size up a situation and recognize it as familiar so that they can call to mind reasonable courses of action. There is no need to exhaustively generate any large sets of options that have to be carefully evaluated, a process that takes a great deal of time and effort. Instead, the decision maker can use mental simulation to imagine how the option would be carried out and determine whether it would be an adequate solution. Mental simulation also allows the decision maker to anticipate problems and strengthen the option. If the option is still unsatisfactory, another is considered, until a workable one is found. Consider a crisis manager in charge of a chemical spill. S/he may size up the situation and define a strategy that needs to be elaborated--an RPD approach that avoids the workload of having to generate every reasonable course of action before going on. A model such as

the RPD strategy assumes that experienced decision makers are better off using their time and energy to think through the consequences of a course of action, rather than to expand the option set.

All of these decision strategies are used in operational settings. Which strategy is used depends on the task conditions. Under some conditions, analytical strategies will be used (e.g., need to optimize, abstractness of problem, combinatorial nature of the problem, need to justify decisions to others) and under other conditions recognitional and nonanalytic strategies will be used (experienced decision makers, time pressure, changing conditions, ambiguous data). There is no best decision strategy--each has strengths and weaknesses.

The Recognition-Primed Decision (RPD) model, in particular, was developed by actually observing and interviewing people who make decisions under stress as part of their jobs. The model was originally developed to describe the decision strategies of experienced Fireground Commanders (FGCs) (Klein, Calderwood, & Clinton-Cirocco, 1986). Klein et al. found the FGCs relied on their abilities to recognize and appropriately classify a situation. Based upon their recognition of the situation as familiar, they were able to identify plausible goals, critical cues to be monitored, what to expect as the situation unfolded, and typical reactions to it. They rarely deliberated about the advantages and disadvantages of various options. Rather, they used available time to evaluate an option's feasibility before implementing it. Mental simulation was used to identify problems with the option. If the option appeared acceptable, it was implemented. If a problem or unacceptable risk was identified, the option was modified or rejected altogether, and another typical response explored. The process continued as the situation progressed and additional information became available.

Other studies have examined the effects of stress on decision making. Calderwood, Klein, and Crandall (1988) studied chess masters playing under regulation conditions (about 150 seconds per move) and blitz conditions (about six seconds per move). The moves of actual games were rated by grandmasters, and no differences in move quality were found. In other words, recognitional strategies enable expert chess players to maintain a high playing standard despite enormous time pressure. Stokes, Belger, and Zhang (1990), studying aviation tasks, also found that experts were not affected by time pressure whereas novices were.

Edland (1989) has also examined the effects of stress on decision making, and found that some studies showed stress to lead to performance decrements, whereas others showed performance enhancements. Her general conclusion was that time stress led to accelerated processing, and to more selectivity concerning which cues to consider. These are two very reasonable reactions to time pressure. She also noted evidence that under time stress, people tend to use simpler strategies rather than the classical, exhaustive strategies.

Stress in the form of time pressure does carry some costs. Using the RPD model, we can see two weaknesses: inadequate opportunity for data gathering, and inadequate time for mental simulation of actions. Under time compression, there is mechanically less opportunity to gather information in order to size up the situation. This does not imply a faulty decision strategy, but a problem with data availability. The Vincennes incident is a good example here. Time pressure prevented the crew members from verifying the altitude of the

74

Iranian Airbus. It is likely that the same decision would have been reached if the same limited information were available and time were unlimited. Time pressure did not degrade the decision. Even with an additional 30 minutes to deliberate (but not to gather more information) it is unlikely that anything would have changed.

Our recent work involves using Decision-Center Designs (DCDs) to create better displays for people who must make decisions under stress (Kaempf, Klein, & Thordsen, 1991). DCD is a type of cognitive engineering, with emphasis placed on the way the user makes decisions and solves problems. DCD includes a theoretical perspective and a data-gathering strategy; both are inter-related.

Within the framework of naturalistic decision making, we have come to view much decision making in terms of adjustments to standard procedures. For example, flight planning is well understood and routinized. However, the important decisions arise when the routines no longer apply or it becomes unclear which routine should be applied. A cockpit display must support decision making for routine circumstances, as well as for unusual, unexpected events when time pressure may be high and consequences for a poor decision may be severe.

Our methods include first looking at what decisions will have to be made and identifying the critical cues that are needed to make these decisions. This information is obtained by interviewing domain experts. In the context of cockpit display this means talking to experienced pilots who are recognized as experts by their peers. A Critical Decision Method (CDM) interview is performed where the domain expert is asked to relate a critical, nonroutine incident when her/his skills were taxed. The interviewer then applies a set of cognitive probes to elicit the domain expert's decisional strategies, perceptual discrimination, pattern recognition, and so forth.

In addition to the CDM interviews, concept mapping (CM) is often used to he'p understand an expert's decision strategies. Concept mapping is a technique where the domain expert is asked a broad global question about his area of expertise. As the domain expert answers the question, the interviewer draws a concept map which is a schematic device for representing meaningful relationships among concepts. Because the concept map provides an overt, explicit representation of individual concepts and the linkages among them, the interviewer and the interviewee are able to exchange views and correct misunderstandings as the map is being developed.

The information in these interviews is then used to isolate the decisions that occur within problem areas, and the cognitive processes and decision strategies used by the operator. From this we are able to identify the items of information and critical cues required to make decisions in the problem areas. Design recommendations are then generated that present information in a manner that supports and enables the operator's decision-making processes. We believe that basing the display design on these critical cues, and other factors involved in the actual decision-making process, will lead to better decision making under stressful conditions.

REFERENCES

Calderwood, R., Klein, G.A., & Crandall, B.W. (1988). Time pressure, skill, and move quality in chess. American Journal of Psychology, 101, 481-493.

Edland, A. (1989). On cognitive processes under time stress. Stockholm: University of Stockholm.

Janis, I.L., & Mann, L. (1977). Decision making: A psychological analysis of conflict, choice, and commitment. NY: The Free Press.

Kaempf, G.L., Klein, G.A., & Thordsen, M.L. (1991). Applying recognition-primed decision making to man-machine interface design (Final Technical Report). Fairborn, OH: Klein Associates Inc. Prepared under contract NAS2-13359 for NASA-Ames Research Center, Moffett Field, CA.

Klein, G.A. (1989). Recognition-primed decisions. In W. B. Rouse (Ed.), Advances in man-machine system research, 5, 47-92. Greenwich, CT: JAI Press, Inc.

Klein, G.A., Calderwood, R., & Clinton-Cirocco, A. (1986). Rapid decision making on the fire ground, Proceedings of the 30th Annual Human Factors Society, 1, 576-580. Dayton, OH: Human Factors Society.

Klein, G.A., Orasanu, J., Calderwood, R., & Zsambok, C.E. (in press). Decision making in action: Models and methods. Norwood, NJ: Ablex Publishing Company.

Montgomery, H. (1989). The search for a dominance structure: Simplification and elaboration in decision making. In D. Vickers & P. L. Smith (Eds.), Human information processing: Measures, mechanisms, and models, 471-483. Amsterdam: North-Holland.

Stokes, A., Belger, A., & Zhang, K. (1990). Investigation of factors comprising a model of pilot decision making: Part II. Anxiety and cognitive strategies in expert and novice aviators. Final Technical Report ARL-90-8/SCEEE-90-2. St. Cloud, FL: Southeastern Center for Electrical Engineering Education.

Tversky, A. (1972). Elimination by aspects: A theory of choice. Psychological Review, 79(4), 281-299.

von Winterfeldt, D., & Edwards, W. (1986). Decision analysis and behavioral research. Cambridge: Cambridge University Press.

FAMILY STRESS AND THE PERSIAN GULF WAR:
SELECTED OBSERVATIONS

Meg Falk
Deputy Director
Office of Family Policy, Support and Services
Office of the Assistant Secretary of Defense
Washington, D.C.

"It was the best of times. It was the worst of times." For our military families, the Persian Gulf War was the catalyst for deep and profound stress as well as moments of deep pride and exultation. The buildup and the war itself saw an incredible outpouring of generosity on the part of Americans which buoyed and supported the spirits of the families. It also presented the darkest of nights for spouses, children, parents, extended family and friends of those who were in the Gulf. What toll did this take on those so personally affected? What are the long term effects on families of those months of sustained anxiety? We have some preliminary answers now and await further information as studies are completed. The on-going research by the Department of Defense, the military services, the Department of Veterans Affairs and other organizations will eventually give us a clearer picture of those effects. I will not attempt to cite these research efforts because many are still in progress. I intend to take previous research efforts on family stress and separation and gauge them against the findings and observations of the DoD Family Support Outreach Conference.

The DoD Family Support Outreach Conference is an unprecedented initiative on the part of the DoD to capture grass roots input on what effects the war had on families. In lieu of sponsoring a "Family Support Lessons Learned" Conference in Washington which would draw a handful of family service providers, the Office of Family Policy, Support and Services determined it would be far more useful to take the conference on the road and speak directly to the families and service members themselves. From August to October, 1991, DoD sponsored joint service teams which traveled to 24 sites ranging from Japan, Hawaii, across the United States, and into Germany and Turkey. The sites incorporated Guard and Reserve units, as well as active duty installations. Through town meetings, family focus groups and interviews, the teams met with over 1500 people including families, service members, unit commanders, military and civilian service providers and school staff. What these teams learned corroborates much of what has been learned through research on how military families cope with stress and what programs and initiatives work best in dealing with those stressors.

LOCUS OF CONTROL

The locus of control literature (Lazarus, 1985) points to how individuals with an internal locus of control cope differently from those with an external locus of control. Those with an internal locus of control see a connection between their own actions and outcomes. External locus of control individuals project blame of outcomes on fate, luck or others and see no connection between their own behaviors and eventual outcomes. Jacobs and Hicks (1987) in their study of "Periodic Family Separation" identified locus of control as a predictor of successful coping in military families. Those who had a strong internal locus of control coupled with a high level of marital functioning

prior to separation fared better during and after the separation than those with an external locus of control and lower levels of marital functioning.

The Outreach Teams found similar trends in those families affected by the Gulf War. Repeatedly, individuals who took action (internal locus of control) to link themselves with accurate sources of information through Family Centers, Rear Detachments, unit sponsored support groups and other community and installation support efforts reported that they dealt relatively well with the stressors of the war. On the other hand, those who took no action (external locus of control) to link themselves with reliable information sources and chose to remain isolated, fell prey to rumors, felt out of control and subsequently experienced more anxiety, stress and anger.

Certainly, obtaining accurate information on loved ones was no small challenge given the significant problems with mail during the war. Many units provided regular communication back to the installations and the Reserve component sites through message, fax or phone which was subsequently communicated to the families through phone trees, newsletters or recorded messages. The units which did provide this essential source of information reduced the stress on those families. This same phenomena applied to the return of the troops from the Gulf. One of the biggest dissatisfiers for the families was the uncertainty and the rumors regarding the units return once the war was over. If families were not linked with an accurate information source during this time, their stress, anxiety and anger grew.

The DoD and the military services have a significant lesson in this. We must focus on those program and systematic efforts which capitalize and promote family internal locus of control. In times of deployment and mobilization, it is critical for units to establish formal chains of reliable information to the families. Moreover, it is essential that the services provide programs which enhance the knowledge and coping skills of the families to include accurate information about the military system, realistic expectations and preparations for rapid deployment and ways of coping with separation.

The time is long past when a service member can responsibly keep his or her spouse in the dark about the military. Those family members who knew little about the military, did not know where to go for information, and relied on external locus of control behavior not only experienced the greatest stressors but also put the greatest drain on support systems. Here we have a leadership challenge. Unit commanders need to communicate very clearly to their members the importance of having families ready for any eventuality the military may bring. Operational readiness includes family readiness--a readiness that is built on internal locus of control behavior in which the member and the unit play a significant role in promoting.

GENERAL WELL BEING

Prior to Operations Desert Shield and Storm, Rosen and Moghadam (1991) studied the general well being of Army wives during an extended deployment of their husbands' unit. They found, as in the locus of control studies, that general well being of a relationship prior to a separation was an indicator of how well the individuals coped during the extended separation. They also found that the unit wives' mutual support had a significant buffering effect against the stressors of the separation.

REPORT DOCUMENTATION PAGE		Form Approved OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION Unclassified	1b. RESTRICTIVE MARKINGS

2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; Distribution unlimited
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	

4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION US Army Health Care Studies & Clinical Investigation Acty	6b. OFFICE SYMBOL (If applicable) HSHN-T	7a. NAME OF MONITORING ORGANIZATION

6c. ADDRESS (City, State, and ZIP Code)	7b. ADDRESS (City, State, and ZIP Code)

8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER

8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS			
	PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE (Include Security Classification)

Proceedings Eighth Users' Stress Workshop (U)

12. PERSONAL AUTHOR(S)
A. David Mangelsdorff

13a. TYPE OF REPORT Final	13b. TIME COVERED FROM Sep 91 TO Sep 91	14. DATE OF REPORT (Year, Month, Day)	15. PAGE COUNT

16. SUPPLEMENTARY NOTATION

17.	COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Stress; stress disorders, post-traumatic stress psychological training.
FIELD	GROUP	SUB-GROUP	

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The proceedings document the presentations at a workshop conducted in September 1991 on the training programs designed for managing psychological trauma and stress.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION Unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL A. David Mangelsdorff, Ph.D., M.P.H.	22b. TELEPHONE (Include Area Code) (210) 221-0671	22c. OFFICE SYMBOL HSHN-T

DD Form 1473, JUN 86   Previous editions are obsolete.   SECURITY CLASSIFICATION OF THIS PAGE
Unclassified

PREFACE

The eighth in a series of stress workshop/conferences held in San Antonio, Texas, the 1991 effort was as successful as previous ones. I would like to thank the following organizations for their interest and concern in support this program: the NATO Research Study Group on Psychological Support, the United States Army Health Care Studies and Clinical Investigation Activity, the University of Texas Health Science Center at San Antonio, and the San Antonio Police Department in general (and Dr. Mike McMains in particular) for their contributions.

It is hoped the experience and information will be profitable to all users.

A. David Mangelsdorff, Ph.D., M.P.H.

iv

TABLE OF CONTENTS
EIGHTH USERS' STRESS WORKSHOP

The Outreach Teams found similar reactions among the people they met and interviewed. The widespread acceptance of family support groups during Operations Desert Shield and Storm went far in ameliorating the stressors of those who participated. At a number of town meetings, individuals gave personal and profound testimonials to the effectiveness of belonging to their support group and to how much it meant to them during those trying times. It is also obvious that those who participated attained a sense of community and bonding that many had not experienced previously. Many expressed a desire to sustain the support groups. This was particularly true in the Guard and Reserve communities. They wanted to continue the sense of community they established during the war and use it as a means to become more educated about the active duty military, which they were quite unfamiliar with at the beginning of the mobilization.

During the Gulf buildup, some of the younger, more inexperienced wives returned home to extended family when their spouses were deployed. Generally speaking, these spouses did not cope as well because they removed themselves from information chains and the mutual support of those who were going through the same experience. Many eventually returned to the installations because they felt more understood there. Outreach Conference testimony confirmed that support groups and informal mutual support networks contributed to the general well being of the homefront spouses during the buildup and the war.

PEACETIME/WARTIME DEPLOYMENT

Dr. Michelle Kelley (1991) had a unique opportunity to study the effects of the Persian Gulf deployment on Navy spouses and mothers and to compare it to her earlier research during peacetime. She found that the spouses of the Persian Gulf sailors did experience more stress and depression than was experienced during peacetime deployments. While the spouses began the Persian Gulf deployment with about the same amount of stress as in peacetime deployments, they showed significantly more stress and depression during the Persian Gulf mid-deployment than a match sample of non-combatants. She also found that the mothers of younger children reported lower self esteem and coping than those of older children. With parental absence, the younger children demonstrated increased levels of externalizing behavior early on in the Persian Gulf deployment; the older children delayed their externalizing behavior which did not decline, in some cases, even with the return of the father.

The Outreach Teams made a concerted effort to meet with school staff during their visits. The information gained seems to corroborate Dr. Kelley's findings. The younger schoolchildren needed much more support, time to talk and lots of attention. Older children did not want to be singled out from their peer groups for special attention and therefore exhibited less external behavior initially. The school counselors, teachers, and administrators were adept at adjusting to the needs of the age differences. One elementary school on a Marine base, where virtually all the children had fathers deployed to the Gulf, made extraordinary efforts to support the children through support groups, yellow ribbon ceremonies, and additional counseling. This school even had a support group for the mothers each morning, providing child care for the pre-schoolers, while the mothers met with the school counselors and others to help them work through their stress.

The Outreach Teams were impressed with all the extra efforts the schools made to assist the children and parents. Those schools which did this exceptionally well were those which had a good working relationship with the military prior to Desert Shield and Storm. In Viet Nam, 16% of those in-country were married with children; in the Gulf War, 60% were married with children. Considering the direct impact on hundreds of thousands of children during the Persian Gulf War, the extraordinary contributions that the schools made in supporting the children should not be underestimated, nor should the stress these children experienced.

REUNION

Family separation is an integral part of the military lifestyle. An extensive body of research has demonstrated that reunion and reintegration of the family can be even more stressful than the separation itself. The Navy experiences this more than any of the other services. A seminal research effort conducted by Archer and Cauthorne in 1986 focused on Navy family separations and reunions and the dynamics therein. Not surprising, they found that reunions affect family functioning and that family stress was higher in the reintegration period than during the separation, more so than previously assumed.

Department of Defense family program managers were keenly aware of this reality and moved quickly to provide reunion briefings to the troops and families prior to the troops' return from the Gulf. The Navy sent Reunion Teams to the ships. The Army and Marine Corps provided the reunion briefings in theater. Several non-profit organizations, like the National Mental Health Association, developed special pamphlets to help with the stressors of reunion. In sum, a wide, concerted effort was conducted to heighten the awareness of the troops and families as to the challenges associated with reunion and ways to deal with issues as they arose. This was a positive, preventive effort which provided sound mental health information and coping skills to address the issues.

The Outreach Teams found that the reunion briefings worked. A number of service and family members stated how helpful these programs were for them. During one town meeting, a salty Navy Master Chief said the reunion briefings on his ship were so valuable and essential that they should be required for all ships returning from deployments. One fallout from these briefings is that a number of service and family members are seeking counseling when problems arise sooner rather than later. This demonstrates that the advice given during the briefings that assistance is available, is being taken seriously, and that individuals are seeking help rather than ignoring the problems.

SUMMARY

The Persian Gulf War presented military families with significant stressors, often far greater than anticipated. The Outreach Conference Team findings demonstrated that the military can go far in ameliorating the consequences of war stressors on families. Providing an accurate link of information, conducting comprehensive deployment and reunion briefings to service members and families, and preparing families for all eventualities the military may bring clearly assist families with the ability to cope while promoting self sufficiency--internal locus of control. Comprehensive family

readiness programs can prepare families for the stress points and intervene effectively at the appropriate times. Effort and energy put into these .pa programs have long term, positive benefits not only for diminishing the families' stress, but also for retention and operational readiness.

REFERENCES

Archer, R.P. & Cauthorne, C.V. (1986). The effects of deployment on Navy personnel and their spouses. Eastern Virginia Medical School and Old Dominion University.

Jacobs, E.W., & Hicks, M.W. (1987). Periodic family separation: The importance of beliefs in determining outcomes. Military Family, Vol. 7, No. 2, Spring 1987.

Kelley, M. (1991). Effects of peacetime and wartime Navy deployment on family structure, maternal support, discipline practices and children's behavior. Norfolk: Old Dominion University.

Lazarus, R.S. et. al. (1985). Stress and adaptation outcomes. American Psychologist, 40, pp. 770-785.

Rosen, L.N., & Moghadam. L.Z. (1990). Predictors of general well being among Army wives. Military Medicine, Vol. 156, July, 1991.

Woods, S., & Gravino, K. (1987). Waiting wives: Suddenly we have so much to say. Paper presented at Inter-University Seminar of Armed Forces and Society.

COMBAT STRESS CONTROL TRAINING IN U.S. ARMY
MEDICAL FIELD TRAINING EXERCISES

James M. Stokes
Academy of Health Sciences
Fort Sam Houston, Texas

The United States Army usually conducts one large-scale medical field exercise each summer. Since 1984, these field training exercises (FTXs) have rotated among several medical brigades (headquarters units). Each of these FTXs has involved between 3000 and 9000 medical troops. The medical brigade headquarters commands two or three medical group headquarters. Each medical group controls two to four hospitals (usually evacuation hospitals, combat support hospitals and mobile Army surgical hospitals (MASHs). The hospitals do not come at full strength and usually are staffed for 50-100 medical/surgical beds.

Each medical group headquarters also usually controls one or more medical clearing companies (with from 50-100 of its 250 patient cots). The medical battalion, or an evacuation battalion headquarters, also controls several helicopter and group ambulance companies and detachments.

Additional medical/surgical specialty detachments augment the hospitals. Preventive medicine, dental and veterinary detachments are assigned to the medical brigade or the medical groups to provide area support. Simulated and actual medical supply and logistics for the many medical units are provided, as they would be in a combat zone, by medical supply units.

In all of these FTXs since 1984, there has been at least one United States Army Reserve "OM" team (psychiatric medical detachment) to play the combat stress control mission. An OM team at full strength has 48 persons. It includes five psychiatrists, six social workers, two psychiatric nurses, a clinical psychologist, and enlisted psychiatric and behavioral sciences specialists and a few administrative support personnel. In practice, most OM teams have come to these FTXs with between 20 and 35 personnel (with at most only one psychiatrist and no psychologist). They have been augmented by volunteers from the other OM teams, and by active duty or United States Army Reserve occupational therapists (OTs) and by OT enlisted specialists. The OTs have been especially eager to demonstrate their field role in promoting return to duty of battle fatigue casualties. The OM team also has some (but usually not enough) vehicles, tents, and equipment.

In most of the FTXs, the OM teams have operated according to evolving U.S. Army combat stress control (CSC) doctrine. The OM team's headquarters has been assigned directly to the medical brigade headquarters. The detachment has divided into smaller, dispersed teams. Depending upon the numbers of each professional discipline and the vehicles available, they have tried to provide CSC support to one or all of the subordinate medical groups in the brigade.

Because these FTXs have been played at the level of the medical brigade in support of a corps, the OM (CSC) detachment has had as one mission the staffing of a "reconditioning center." "Reconditioning," by definition, is the 4-14 day treatment of those battle fatigue casualties who do not return to duty in the first 3 days of restoration treatment. Reconditioning cannot be simulated in

real time in a 4-5 day FTX. However, the staff can do the admissions workup and then go through the daily schedule of structured activities in "quick time" or "time compression," where 10 minutes equals 4 or 6 hours.

In the FTXs, as in evolving doctrine, the OM (CSC) reconditioning facilities have been co-located with an evacuation or combat support hospital. They have been dependent on the hospital for food, water, fuel, medical records, and often for borrowed tents and cots. This is as it would be in real combat. The CSC teams must work out duty-sharing arrangements with the host hospital without letting their personnel and equipment be absorbed into that hospital; absorption would rightly happen to a hospital augmentation detachment like a neurosurgery team, but must not happen to a mobile CSC team.

Experience has shown that the reconditioning center is best set up in the hospital staff quarters area, near the kitchen, mess hall, laundry, and motor pool. It should not be among the triage or ward tents, and must maintain a non-hospital, soldiering milieu. The simulating patient role-players can be assigned to assist the host hospital with real work details, as well as being fed, showered, rested in the cots, and involved in recreational, physical fitness, and group debriefing activities.

In these FTXs, other subteams of the OM detachment are normally deployed to attach to one or more of the medical clearing companies under the medical battalion in the medical group(s). These teams usually attach to the medical company for support and remain with it 24 hours a day to triage, evaluate, and provide restoration treatment for locally-generated battle fatigue cases (both simulated and "real"). "Restoration," by definition, is the actual 1-3 day initial treatment of battle fatigue soldiers and is best done at the medical treatment or clearing company closest to the soldier's own unit, not at a "hospital." Restoration requires a reasonably sized tent, preferably with cots, dedicated to the recovering battle fatigue casualties.

The CSC teams at the clearing companies also provide actual preventive consultation, education, and case evaluations to the medical company and all other nearby units. In some FTXs, when there are too few CSC personnel to provide a continuous presence at the medical companies; the CSC team has instead provided a regular schedule of circuit-riding. The team spends the night at the OM team headquarters or reconditioning center (base camp); and drives to visit one clearing company in the morning, then on to another each afternoon. The teams are prepared to spend the night at a clearing company if workload or the tactical situation requires. In this situation, the patient holding sections and medical treatment teams of the clearing company are trained to manage and restore all but the problem cases. The problem cases are evaluated by the CSC team each day and, if necessary, are taken back to the reconditioning (and restoration) center by the team as it completes its daily rounds.

The medical FTXs also routinely include non-medical combat support and combat service support units, especially signal battalions and detachments to set up and operate the communications equipment. Some FTXs have also had military police companies to provide rear area security and manage enemy prisoners of war. Engineer units may be available to assist with hospital site preparation and personnel replacement elements to coordinate the return to duty of simulated casualties.

At some of these FTXs, the U.S. Air Force provides C-141 and/or C-130 aircraft to conduct simulated air evacuation from the combat zone (taking off with the simulated patients, flying around and landing nearby so the patients can be "recycled"). The Air Force may also provide a mobile air staging facility (MASF) with medical and nursing staff to hold and prepare the patients for the flight. In the future, it may be possible to involve a Navy hospital ship in these exercises, but that has not yet been done.

A few of the FTXs in California and Mississippi have combined the medical brigade's exercises with the annual training of the state's National Guard division or separate brigade. In some instances, the maneuver brigade or division medical companies and organic battalion assets have been included in the medical evacuation play, to be discussed below. On those occasions, the OM team has fulfilled its "forward" combat stress control mission by sending mobile teams forward to reinforce the division and brigade medical companies.

The virtue of such large-scale medical exercises for training in CSC is that they suggest the magnitude and complexity of the real combat mission. The FTXs illustrate the real-world problems of exercising command/control through multiple layers of headquarters, communicating with dispersed teams over other units' overworked and breakdown-prone field switch boards and radio nets, traveling and navigating to find unfamiliar units, and negotiating allocation or loan of scarce resources such as tents, food, water and vehicle maintenance. All of these problems must be overcome in the combat theater.

The big FTXs provide actual supported units and audiences for staff briefings, command consultation advice and preventive educational presentations. They may provide extensive simulated patient play, which can include simulated stress and neuropsychiatric cases. They also invariably provide actual overstressed soldiers who need individual case evaluation and, when appropriate, on-site treatment. Exercises of this size also always provide one or more true neuropsychiatric cases, usually with pre-existing disorder, who decompensate and must be evacuated to the supporting hospital system.

The shortfall of these FTXs is that, large as they are, they are still only a small-scale model of a real Army corps' area of operations. The medical units are not surrounded by the many more non-medical combat service support units with which they would be aggregated into base defense areas and base defense clusters. The real world distances between clusters would be much greater than can be achieved at some of the posts hosting the FTXs. The rear battle threat may be simulated by "opposing forces" attacks, but there is little real danger or difficulty when going from unit to unit, which may create a false sense of security. Still, such FTXs are much better preparation for learning to live and function in the field as part of a huge system than are purely individual or small unit training exercises.

The major medical FTX typically has between 300 and 600 personnel assigned to play the simulated casualties. The FTXs generally try to achieve a mixture of simulated surgical wounds and injuries plus non-battle diseases (including neuropsychiatric disorders), which conforms roughly to the expected incidences in mid/high intensity conflict. They may include battle fatigue casualties. Chemical casualties are usually included, and nuclear casualties may be. The source book for patient play is FM XXX. This manual provides make-up and acting instructions for each of the patient categories, plus model Field

Medical Care (DA Form XXX) entries which specify vital signs and physical findings.

Role-players who are playing diseases or minor injuries can be briefed quickly at the FTX patient operations center (POC). Those role-players who play having surgical wounds must receive extensive make-up ("moulage" from a trained "moulage team" at the POC). The make-up artists do a remarkable job of mimicking serious and even grossly deforming wounds.

The realism of the moulage is one of the factors (along with sleep loss, field sights, sounds and smells, and sometimes the sound of actual artillery firing in the distance) that has provoked distressing and even temporarily disabling post-traumatic stress symptoms in some medical personnel who have had previous combat experience in Vietnam or other conflicts. Such persons may self-present or be referred to the CSC teams for help dealing with the memories. Many more may simply "tough it out" and then perhaps decide to leave the Army, National Guard, or Reserves rather than face another painful training exercise. This is one of the reasons why the CSC teams have active and visible outreach programs.

Most of the simulated patients are picked up at the patient moulage center and taken directly to one of the medical treatment facilities by the helicopter or ground ambulances that are dispatched to transport them. A few patients may be taken by truck to remote field sites, where the ambulances must find them. The patient players in these FTXs may be made-up and sent out once, twice or even three times in a 12-hour shift. The number of times depends on the degree of make-up and the prognosis of the injury. Those who can be treated and released quickly, or who are "dead on arrival" or "die" soon after can be returned to the POC by a shuttle service and be recycled quickly. For the role-players, the experience can be tiring and uncomfortable. They are covered with make-up and prosthetic rubber or plastic, strapped to a litter, then transported in the summer heat in a vibrating helicopter or bouncing ground ambulance to one or more medical facilities where one may wait for minutes to hours to be examined; it is not an easy job.

The patient players are often members of another medical unit within the Medical Brigade's area (such as a General Hospital) that has been tasked to provide "patients" as its part in the FTX. These role-players usually serve for all 4-5 days of continuous scenario operations. They are "guaranteed" time for food and sleep, but that may be disrupted by transportation difficulties or the inhospitable field or barracks environment. In other FTXs, the patient players may be borrowed from the participating hospitals and other medical units on a day by day basis. When National Guard divisions or brigades have been involved in the FTX, some line unit soldiers may be declared casualties and be evacuated through their organic medical platoons and companies to the corps facilities, one time only. These soldiers will not have extensive moulage make-up unless a moulage team is deployed forward. In some FTXs, there may also be volunteer role-players from other organizations, such as the state's National Guard cadet program. These details of where and how the role-players are obtained have proven very relevant to the real-world stress control missions of the CSC teams.

A recurrent finding is that both the role-players and the medical units become involved in the scenario portion of the FTX with enthusiasm. However, for the medical units, the novelty of realistically moulaged patients wears off

after a while, as the triage and surgical teams can only pretend to start the IVs and insert the nasogastric and chest tubes, and only get to explain what surgical procedure they would be doing. As the triagers, OR teams and ward staffs themselves become progressively more sleep-deprived, hot, dirty, and uncomfortable, they become increasingly short with and even negligent towards the role-playing patients. That increases the stress and undermines the motivation of the already uncomfortable "patients."

Those role-players who have been assigned to serve the full duration of the FTX (and even some of the volunteers) begin to grow weary of the exercise. Some may actually require the attention of mental health workers for the transient "exercise fatigue" they suffer. They begin to find ways to delay or evade being made-up and sent out again. By the last night, a few may even become "combat refusers," flatly declaring to the POC (or telephoning home tearfully to family) that they will resign from the Army if forced to go out again as surgical patients. The result has been that the OM teams have performed excellent service "treating" the "battle fatigued" surgical moulage players.

Anecdotes from actual exercises help to underscore these experiences. During the Wounded Warrior FTX (1985), the OM team elements at the clearing companies established ongoing "ventilation/gripe" sessions for the surgical/medical role-players. These sessions were reported by the role-players as being very helpful to them. A memorable moment in the FTX occurred during a brief afternoon thundershower, when lightning struck a pine tree, which fell and barely missed the tent in which such a session was going on.

During the Dusty Bull FTX (1988), the OM team is credited by the 806th Medical Brigade with "saving" the FTX. The moulage role-players became very disgruntled by the evening of the fourth day, and the Corps surgeon and POC leader consulted the OM team. They immediately implemented the recommendations to call a temporary halt to give all role-players food and sleep. Meanwhile, the OM team sent a contingent on night convoy to the POC, and early in the morning initiated a concentrated schedule of debriefing sessions mixed with entertainment that had the role-players ready to continue the FTX soon after sunrise.

It should be apparent from the preceding discussion that the psychiatric (stress control) detachments can be fully and profitably occupied in these FTXs by concentrating on their real world preventive and treatment missions. Unlike the surgical teams (and like the dental, preventive medicine, and veterinary food inspection teams), they have plenty of real world missions, provided they are proactive, mobile, and helpful. They must not remain in their tents waiting for "patients" to be sent to them. Indeed the people who would send such cases to them (or come on their own behalf) are more likely to misunderstand and mistrust the mental health teams if those teams are relying only on their professional reputations.

In fact, too much simulated stress casualty play may actually be counter-productive. It may keep the mental health teams so busy (doing what they already know fairly well how to do) that they put off undertaking the new challenges of going out, meeting, and forming trusting professional relationships with all of the units that they should be supporting. They need to become fully familiar with the missions and stressors of the supported units.

With that warning said, the major medicine FTXs (especially the earlier ones--Dusty Bull 84 and 88, Wounded Warrior 85 and MEDEX 86), did have extensive simulated stress casualty play. A mobile training team (MTT) from the Behavioral Sciences Division, Academy of Health Sciences, U.S. Army (San Antonio, Texas) was invited by the medical brigades to assist in training the OM teams and guiding their employment. The MTT was also to assure that a suitable number and variety of simulated battle fatigue and neuropsychiatric casualties were played.

The moulage source book, FM XXX , provides only a very few neuropsychiatric and combat stress roles (with sample field medical cards). The battle fatigue cases are mostly the dramatic (but actually rare) and problematic cases. The neuropsychiatric cases are also rather limited. For example, the alcoholic with impending delirium tremens has physical findings (such as a large and tender liver with ascites). That would be common, perhaps, in a big city hospital emergency room, but would not be typical of the heavy-drinking but otherwise successful Army NCO or officer, who might go into delirium tremens if he suddenly cuts back from his regular heavy daily drinking. The soldier-alcoholic's general health and physical fitness might appear good with only the more subtle signs of heavy alcohol use.

In order to provide a wider variety and more representative sample of battle fatigue and neuropsychiatric cases, the MTT has fielded and tested a set of role-player instruction sheets. Examples are given as Figures 1 and 2.

Each instruction sheet included the field medical card (DA Form XXX) entries and physical findings. It included general instructions to the role-players plus a checklist of recent stress events they should incorporate into their story about themselves. It gives specific instruction on what to do, how to look, and what to say, plus further instruction on how to change or not change based on how they are talked to and treated.

The battle fatigue cases have been written in sets of 20 cases. Each case is unique, but in each set there are three simple exhaustion/sleep deprivation cases, five with primarily anxiety symptoms, five with primarily depressive and/or survivor guilt symptoms, three variations on dissociative (memory loss) symptoms, and four variations on conversion symptoms. This breakout still somewhat favors the dramatic and problematic end of the battle fatigue spectrum, at the expense of the more common exhausted, anxious, and depressed forms. However, that shift is appropriate for corps-level or division rear-level exercises, where most of the simpler cases can be assumed to have been treated and released further forward.

The instructions have deliberately omitted the stereotypic "pseudo-psychotic," "acting out" and potentially violent types of battle fatigue cases. This was done for two reasons. First, they are actually rare, and it is important to counteract that stereotype lest it become a self-fulfilling prophecy as soldiers become overly suggestible with battle fatigue. Second, there will always be a few role-players who will overact, or use this opportunity of playing a stress casualty as their license to play "psycho," in spite of warnings not to.

In addition to the 60 variations on battle fatigue, instructions have been written for neuropsychiatric cases, including a manic episode, paranoid

schizophrenic-like psychoses, acute organic brain syndromes (atropine or anti-cholinergic type), and alcohol withdrawal and other substance abuse problems. Some of these cases require additional administrative or legal action. Some of these cases do provide for the players to become threatening and disruptive. This will give the medical or psychiatric triagers/treaters opportunity to practice safe management and restraining techniques without erroneously targeting battle fatigue as the likely cause. The players of these roles must be strongly instructed not to continue their resistance to the point where they or others get hurt.

Interestingly, we observed a time when one of the non-violent battle fatigue cases--a soldier with psychogenic deafness who was pretending to be unable to hear instructions or questions--was wrestled to the ground and his eye glasses broken by over-zealous triage and security personnel who mistakenly identified him as either a "psycho" or an enemy infiltrator. All of the observer/controller personnel in the FTXs must be trained to intervene to prevent such unnecessary safety violations whether by the role-playing patient or the treaters.

Several "special cases" which involve misconduct combat stress behaviors and other legal issues have also been prepared as role-player instruction sheets. Examples are the soldier who confesses that the guilt he is feeling comes from having participated in commission of an atrocity or the "combat refuser" who describes having had a pacifistic religious conversion experience while under extreme stress. These cases provide training not only in clinical management, but also in the administrative actions that should be initiated and followed through the system.

The role-player instruction sheets are sufficiently detailed that a reasonably literate and motivated soldier could take one out of his pocket, read it carefully, and know how to play a fairly detailed case, using his imagination to fill in the necessary details. However, experience shows that it is best to invest more effort in the selection and training of battle fatigue and neuropsychiatric role players. If there are psychiatric nurses as members of the moulage team, they may be recruited and trained to choose only those role-players who are themselves mentally stable and able to act the part. Otherwise, members of the MTT must be detailed to do this.

LEADER'S MANUAL FOR COMBAT STRESS CONTROL

FINAL DRAFT

THIS PUBLICATION IS FOR REVIEW PURPOSES ONLY.
IT DOES NOT CONTAIN ARMY APPROVED DOCTRINE.

HEADQUARTERS, DEPARTMENT OF THE ARMY

ACADEMY OF HEALTH SCIENCES
UNITED STATES ARMY
FORT SAM HOUSTON, TEXAS 78234-6100

JUNE 1991

USAF PREPARATION FOR DESERT SHIELD/STORM

Walter E. Sipes, Ph.D.
Armstrong Laboratory
Brooks AFB, Texas

A total of 4500 USAF medics were deployed in support of Operation Desert Shield/Storm. These medics manned one Contingency Hospital, 14 Air Transportable Hospitals and 26 bed downs or Squadron Medical Elements. Additionally, medical personnel were moved to support hospitals in England and Europe.

Mental health support for the USAF in the Area of Operations consisted of eight psychiatrists, nine clinical social workers, 14 clinical psychologists and approximately 24 mental health technicians. Because of the nature of the operation, the relatively prolonged period of anticipation of combat, and the relatively low number of combat psychiatric casualties, the mental health providers needed to shift from a treatment approach to a consultation and proactive approach.

To support the mental health providers, packets of reprints were sent to them in Southwest Asia and consisted of the included references. In addition, notes of a number of combat stress lectures were also sent.

REFERENCES

Gifford, R.K., & Tyler, M.P. (1990). Consulting in grief leadership: A practical guide. Disaster Management, Vol. 1, #4, 218-223.

Kentsmith, D.K. (1986). Principles of battlefield psychiatry. Military Medicine, 153(2), 89-96.

Mitchell, J.T. (1983, January). When disaster strikes: The critical incident stress debriefing process. Journal of Emergency Medical Services, 36-39.

Quin, N.E. (1982). The impact of diseases on military operations in the Persian Gulf. Military Medicine, 147, 728-734.

Rahe, R.H. (1988). Acute versus chronic psychological reactions to combat. Military Medicine, 153, 365-371.

Stokes, J. (1990, November). Handbook--Planning for combat stress control. U.S. Army Draft Doctrine Draft Chapter 12 for revised FM 8-55, Planning for Health Service Support.

OPERATION DESERT STORM: LESSONS LEARNED
WILFORD HALL USAF MEDICAL CENTER DEPARTMENT OF PSYCHOLOGY
AND THE LACKLAND COMMUNITY

Mary L. Frambach, Ph.D.
Wilford Hall Medical Center
Lackland AFB, Texas

Soon after Iraq invaded Kuwait in August 1990, the United States Military prepared itself for war. From Lackland AFB, Texas, 1,036 military members were deployed in support of Operation Desert Storm. Four hundred and nine were deployed to the theater of operation in or near the Persian Gulf, while 627 made up a medical detachment from Wilford Hall USAF Medical Center whose mission was to set up and staff a 100-bed capacity contingency hospital at Little Rissington AB, England. With immediate family members included, upwards of 4,000 individuals from Lackland AFB were directly influenced by Operation Desert Storm. Those indirectly influenced by the deployment and absence of active duty personnel was estimated by support services to be three times that number, or 12,000.

Only 9 months prior to the beginning of the Air Campaign against Iraq, Wilford Hall USAF Medical Center served as the primary reception and triage area for the casualties from Operation Just Cause. Of the many "lessons learned" from the Panama incident was the urgent need for immediate support of the family members of those deployed or injured. Wilford hall and the Lackland Community, specifically the Family Support Center, worked in conjunction to prepare for the deployment and eventual return of members involved with the Gulf War. Family Support Center personnel provided financial, family, and peer counseling support in addition to a number of on- and off-base initiatives. Although Wilford Hall provided a number of services in direct relation to Operation Desert Storm, only the mental health services of the Department of Psychology will be discussed in this paper.

In preparation of deployment, the Family Support Center conducted numerous pre-deployment briefings. They invited pertinent military and civilian professionals as keynote speakers to address specific concerns. Moreover, additional staff was available for peer counseling. At these briefings, legal preparation, military payment procedures, and coping with separation were discussed at length. Handouts were provided so that families could continue to prepare themselves for separation independent of the counselors. Other topics included in these briefings included: How to Write a Letter To and What to Say to a Deployed Loved One, How to Talk with the Media, and Safety Concerns While the Military Member is Away. The Family Support Center staff took advantage of the many contacts made during the Panama incident with commercial businesses and therefore were able to provide a number of free or reduced cost services. A sampling of the many programs sponsored by the Family Support Center can be found in appendix A. Families of deployed members expressed great appreciation for these sessions and the Family Support Personnel believed these briefings provided additional information not available through more traditional "military unit" channels. For additional information regarding these or other Family Support Center programs, please contact Mr. Rudy Holmes or Ms. Peggy Auderer at the Family Support Center, Lackland AFB, Texas.

As mentioned previously, the experience of Operation Just Cause was fresh in the minds of many when the Gulf War began. Therefore, the approach to

intervention was more proactive than the reactive nature just 9 months before. Advanced notice was crucial. For Operation Just Cause, many medical personnel learned of the United States military involvement in Panama upon arrival to work the morning of the invasion. For the Gulf War, Wilford Hall had approximately 2 months warning to assess needs and coordinate services. Still, much was required to address the increased psychological demands placed upon the deploying members and their families. Provisions for ongoing psychological services for Wilford Hall patients also warranted attention.

The most efficient means of support provided by the Psychology Department at Wilford Hall were psychoeducational presentations and support groups. One educational presentation provided by Psychology Department staff members deserves attention for it exemplifies the various facets of psychological intervention a mental health provider may be tasked to provide.

Two psychology staff members were invited to talk to volunteers who staffed the national Air Force 24-hour Telephone Hotline located at Kelly AFB. All Hotline volunteers were Active Duty Air Force, and none had formal training in peer counseling. The rotating, 10-team received from 10 to 1,000 calls an hour concerning the location of a family member, sites and damage of recent SCUD bombings, number of USAF casualties, and the expected length of the war. In addition, volunteers were asked by callers about their son's recent death and were called "Baby Killers" and worse by war protesters. It quickly became apparent to the Hotline coordinators that their staff was extremely unprepared for the psychological effects these calls had on the volunteers.

The presentation by the two Wilford Hall psychologists addressed issues such as the limitations of the volunteers, how and when to refer callers for professional help, the importance of non-disclosure of personal information, and safety concerns while on duty. Stress management techniques, recommendations regarding rotating the position of the busiest phone line, and suggestions for dealing with difficult calls were provided.

Other services by the Department of Psychology included psychological testing, support groups for spouses and children of those deployed, and expert testimony in forensic cases for Air Force members who refused to be deployed. One staff psychologist was interviewed by a local television station regarding the anticipated effects of the war on children. A list of the number and kinds of services provided in direct relation to Operation Desert Storm and patients seen for problems related to Operation Desert Storm can be found as appendix B. Upon initial assessment the number of patients served may seem low. However, this can be explained by the fact that for the majority of people, the emotional response to Operation Desert Storm was a normal reaction to an unnatural situation. Therefore, most individuals could be best served through services provided by supportive agencies, such as the Family Support Center. It is of note that these numbers only represent services provided by the Department of Psychology at Wilford Hall. Credit and appreciation is expressed to MAJ Wayne Talcott and Dr. Edna Fiedler for their forethought in collecting this data.

In summary, there are a number of "lessons learned" regarding the psychological needs of active duty military members and their families during a time of rapid deployment and war. One, the importance of pre-deployment briefings. Although deployment briefings are usually conducted at the squadron level, the emotional needs are rarely addressed as the unit's military mission

prevails. Additional briefings which address emotional, financial, and legal concerns are paramount. Two, the necessity of assuming the role of a consultant to commanders. A mental health provider will be tasked to integrate his/her professional understanding of human behavior with the military mission of a particular unit. Line commanders may need to be reminded of the psychological needs of their unit members and their families. Commanders will appreciate input on how and where to best attain additional support. Three, the absolute necessity of a working relationship with outside agencies to whom you can refer people who require support rather than psychological treatment. The Department of Psychology and the Family Support Center nourished a working relationship which benefited both parties, and ultimately increased services with little overlap. Finally, the importance of data collection regarding services provided and man hours expended. Although data collection is often something the clinician abhors, its worth quickly becomes invaluable for understanding a historical perspective of services provided. In addition, meaningful data is crucial for informing the command staff and others of the numerous roles and value of psychologists in war time.

APPENDIX A

FAMILY SUPPORT CENTER
LACKLAND

OPERATION DESERT SHIELD/DESERT STORM

OFF BASE INITIATIVES:

1. United Way Help Line

2. Southwestern Bell

3. City Public Services

4. Mortgage Companies

5. Property Managers

6. Desert Fax (AT&T)

7. Better Than A Letter (Montgomery Ward)

8. White Christmas (J.C. Penney)

9. Vehicle Checks (Fiesta Lincoln Mercury)

APPENDIX A (CONT.)

ON BASE INITIATIVES:

1. Pre-deployment briefing with handouts

    -legal office, military pay, security police

2. Counseling and Counseling referrals

3. Financial Support, Air Force Air

4. Red Cross, 24 hour Air Force Hotline

5. Morale, Welfare and Recreation (MWR)

6. NCNB Bank, Lackland Federal Credit Unit

    -credit extensions

7. Base Exchange

    -lay away items, returns

8. NBC Today Greetings

9. Free Thanksgiving Dinner at Dining Hall

10. Yellow Ribbons

11. Red, white and blue ribbons

APPENDIX B

**WILFORD HALL USAF MEDICAL CENTER
DEPARTMENT OF PSYCHOLOGY**

OPERATION DESERT STORM

OCTOBER 1990 - MARCH 1991

**Patients seen in <u>direct relation</u> to Operation Desert
Storm**

Psychological Assessment/Testing	51
Supportive Therapy	19
Education, Crisis Intervention, Consultation	18

- Security Police Squadron'

- Air Force Hotline

contacts = 88
patient hours = 191.5

**Patients seen for problems <u>related</u> to Operation
Desert Storm**

Group Treatment	139

- Waiting Wives

- Stress Management

- Depression

Individual Treatment	70

contacts = 209

NAVY PSYCHOLOGY TRAINING MODULE: MEDICAL PSYCHOLOGY

John C. Fowler, Ph.D.
Naval Military Personnel Command
Washington, DC

Never before in the history of warfare has so much emphasis been placed upon the mental health of our combatants. From timely intervention for battle fatigue, to treatment for delayed post traumatic stress, today's combatants are receiving concise and efficacious treatment in an attempt to prevent sequelae seen in past wars.

The U.S. Navy is currently training 16 doctoral level psychologists yearly to work throughout the fleet and the U.S. Marine Corps. Our training programs prepare them to treat combatants and disaster workers in an effort to prevent negative effects of the stressors of critical incidents on victims and caretakers. Much of this training is, in fact, stress inoculation training for our psychologists to prepare them to react effectively in a disaster scenario. The following is an outline of the Medical Psychology Training Rotations offered at Bethesda Naval Hospital, Bethesda, Maryland, Portsmouth Naval Hospital, Portsmouth, Virginia, and Balboa Naval Hospital, San Diego, California.

MEDICAL PSYCHOLOGY OBJECTIVES AND PROCEDURES

LESSON TOPIC 1: MEDICAL PSYCHOLOGY OVERVIEW

TERMINAL OBJECTIVE: Demonstrate an understanding of the interrelationship between psychological factors and physical illness including the physical factors in psychological disorders. Desensitize the psychologist to disfiguring wounds and death in the event of war or disaster.

OBJECTIVES:

1.1 Demonstrate the ability to diagnose organic disorders, psychosomatic disorders, hysteria, malingering, and the concept of secondary gain.

1.2 Know the DSM-III-R.

CLINICAL PROCEDURES:

 a. Attend morning rounds in a designated medical department. Example: Bethesda - Neurology, Portsmouth - Internal Medicine, San Diego - (optional) for entire rotation.

 b. Follow a Neuro-surgery patient through from admission to discharge to include all diagnostic procedures, interventions and aftercare. Utilize neuropsychological and psychological evaluations where appropriate.

 c. Attend lectures on psychosomatic illness.

 d. Attend to maxillofacial patients in the Dental Command.

e. Attend a minimum of three rounds in Endocrinology Clinic and attend ward rounds.

f. Attend a minimum of three rounds in Oncology and pick up an oncology patient for treatment.

g. Attend a bronchoscopy and pulmonary function test in the Pulmonary Clinic.

h. Attend an echocardiogram, electrocardiogram, stress test, and cardiac catheterization in the Cardiology Department. Attend a minimum of three ward rounds.

i. Attend Electroencephalogram Clinic and readings in the Neurology Department on a regular basis. Include the Sleep Clinic where available.

j. Spend a minimum of 3 days in the Allergy and Rheumatoid Clinics.

k. Learn basic medical skills and terminology such as vital signs, charting, and so forth, taught by department heads or appropriate staff.

LESSON TOPIC 2: ANATOMY, PHYSIOLOGY AND PATHOLOGY

2.1 Demonstrate a working knowledge of anatomy, physiology, and pathology.

CLINICAL PROCEDURES:

a. Attend classes provided by the medical psychologist on anatomy and physiology and the postmortem examination (autopsy).

b. Attend three complete postmortem examinations to include the removal of the brain.

c. Attend regular Neuropathology Conferences (brain cuttings) as scheduled in the Neurology Department.

LESSON TOPIC 3: TERMINAL AND DISFIGURED PATIENTS

OBJECTIVES:

3.1 Work with terminally ill patients and their significant others in the areas of death and dying and bereavement.

3.2 Develop self awareness and inoculation to endure working with death and disfiguring diseases or disorders.

CLINICAL PROCEDURES:

a. Attend to patients in Maxillofacial Surgery undergoing disfiguring surgery and help them and their significant others to accept the consequences of the disease process.

b. Work with a minimum of two patients undergoing treatment for cancer in the Oncology Clinic, including a child if possible. Include their significant others in this process.

LESSON TOPIC 4: BEHAVIORAL MEDICINE INTERVENTION

OBJECTIVES:

4.1 Demonstrate understanding in the use and application of behavioral medicine interventions to include biofeedback, relaxation techniques, performance enhancement techniques, hypnosis, altered states, cognitive therapy, behavioral intervention, biofeedback assisted analysis, life-style modification and other techniques appropriate to enhance the well being of the patient.

CLINICAL PROCEDURES:

a. Training on biofeedback equipment for the diagnosis and treatment of stress related disorders.

b. Conduct a Headache Management Clinic with the Neurology Department or Internal Medicine (this is dependent upon available staff within the medical departments).

c. Conduct a Pain Management Clinic with the Anesthesiology and/or Oncology Departments.

d. Conduct a Sexual Dysfunction Clinic with the Urology and/or OB-GYN Departments.

e. Conduct a Hypertension Clinic with the Internal Medicine and or Neurology Departments.

LESSON TOPIC 5: CONSULTATION

OBJECTIVES:

5.1 Demonstrate consulting skills with physician, dentists, and support personnel within the hospital to formulate and coordinate treatment plans. The treatment plans will address psychological factors involved in medical conditions and contribute to the overall medical/dental management of the patient.

CLINICAL PROCEDURES:

a. As a member of the Implant Board conduct Psychological Evaluations on implant patients in Maxillofacial.

b. Conduct a Temporomandibular Joint Dysfunction (TMD) Clinic for the Dental Command.

c. Conduct classes on Psychological Aspects of TMD at the Dental Command.

d. Conduct lectures on Stress Management of the Dental Patient for the Dental School.

e. Conduct lecture series for Dental School on psychological principles in dentistry.

LESSON TOPIC 6:   DOCUMENTATION

OBJECTIVES:

6.1 Demonstrate skill in writing evaluations with specific treatment plans in the medical/dental and psychological treatment of the patient.

6.2 Demonstrate skill in documenting the course of treatment on a regular basis.

6.3 Demonstrate skill in writing an integrated treatment summary at the conclusion of each case to reflect the diagnosis, treatment, outcome, and prognosis.

LESSON TOPIC 7:   STRESS MANAGEMENT

OBJECTIVES:

7.1 Conduct regular ongoing stress management groups and seminars for hospital staff.

LESSON TOPIC 8:   PATIENT TREATMENT

OBJECTIVES:

8.1 Attend rounds in designated medical departments specific to cases assigned. (These are medical subspecialties that are included in the treatment of your patients.)

8.2 Demonstrate familiarity with medical procedures which patients must undergo for diagnosis and treatment.

    Procedure examples:
    a. TMD Clinic
    b. Implant Board
    c. Bronchoscopy
    d. Radiology: X-ray procedures, CAT Scans, MRI, and Ultrasound
    e. Other procedures specific to cases.

8.3 Demonstrate the ability to assist patients and staff in procedures which are distressing to the patient using psychological techniques.

8.4 Demonstrate the ability to endure extensive and time consuming procedures with a physician to gain an understanding and appreciation for the physical and emotional endurance necessary for physicians to function.

8.5 Standby in Neurosurgery through entire case with neurosurgical team. Aid surgeon in speaking with the patient and the family of the patient undergoing surgery.

LESSON TOPIC 9: HEALTH PROMOTIONS

9.1 Demonstrate skill in conducting treatment for habit control.

9.2 Provide consultation and lectures to Pulmonary Clinic with their Smoking Cessation Groups and individual treatment where appropriate.

LESSON TOPIC 10: PHARMACOLOGY

10.1 Demonstrate proficiency in understanding the utilization of psychotropic drugs. Include pharmacology and toxicology in the treatment of non-psychological disorders and diseases.

10.2 Attend continuing education in the use of drugs in the treatment of psychological disorders. (Psychiatry will often do this for us, if not seminars are available.) Much of the knowledge of pharmacology is gained through interaction with the physicians throughout your rotation. Also attend continuing education presentations in pharmacology for hospital staff.

THE NATIONAL CENTER FOR POST-TRAUMATIC STRESS DISORDER

Matthew J. Friedman, M.D., Ph.D.
Veterans Administration Medical Center (VAMC)
National Center for PTSD
White River Junction, Vermont

Public Law 98-528 stipulates that a National Center for Post-traumatic Stress Disorder (PTSD) carry out a broad range of multidisciplinary activities in research, education, and training. Such a Center must encompass the full spectrum of applicable theoretical and clinical approaches. The National Center must carry out the most advanced PTSD research and facilitate research elsewhere. It must provide comprehensive educational programs from on-site training to large-scale colloquia. The National Center must serve as the hub of a communication network linking all Veterans Administration (VA) PTSD programs through which it can disseminate the latest clinical and scientific information on PTSD. Finally, it must evaluate systemwide PTSD programs and clinical initiatives.

In 1984, the Center for Stress Recovery was established as the first National Center at the VAMC in Brecksville, Ohio. Funding for this site was discontinued in 1987 because it had not established itself as the kind of research and educational resource that PL 98-528 intended to create.

It was our opinion that no single site in the USA could successfully carry out the Congressional mandate. Therefore, we proposed that the National Center for PTSD consist of a multisite consortium, with each site having areas of special and unique expertise as well as overlapping interests. We believed that this organizational structure could provide a critical mass of strong leadership with proven productivity in research, treatment, education, and evaluation activities in PTSD.

Following a national competition, we were selected as the National Center for PTSD in May, 1989. Funds were made available late in August, 1989. The National Center was dedicated at a ceremony held at Menlo Park, California, on November 13, 1989, at which Secretary Derwinski, Congressman Tom Lantos, and Paul Errera, M.D., Director of Veterans Administration Center Office's (VACO) Mental Health and Behavioral Sciences Service, were the guest speakers.

ORGANIZATION

Our consortium consists of five divisions:

1. The Executive Division, located at the White River Junction VA Medical and Regional Office Center, is directed by Matthew J. Friedman, M.D., Ph.D. It carries out strategic planning, directs the overall operation of the National Center, and interfaces with VA and non-VA programs and organizations. It houses the PTSD Resource Center, directed by Fred Lerner, D.L.S., which is establishing PILOTS, a comprehensive bibliographic database of the Published International Literature on Traumatic Stress. This office also publishes the PTSD Research Quarterly, a newsletter reviewing recent PTSD literature.

2. The Behavioral Science Division at the Boston VAMC, under the direction of Terence M. Keane, Ph.D., is at the forefront of efforts to develop

scientifically validated instruments to measure PTSD. Current investigations address both psychological and psychophysiological assessment procedures. In addition, Division staff conduct research on basic mechanisms of PTSD as related to cognitive information processing, family and social support factors, and gender issues. Studies of behavioral treatment process and outcome comprise a third major focus of Division research. Training activities of the Division emphasize both research and clinical skills.

3. The Clinical Neuroscience Division at the West Haven VAMC is under the direction of Dennis S. Charney, M.D. This division is one of the few sites in the world investigating the effects of severe stress on brain function and developing new biological approaches for the diagnosis and treatment of PTSD. It consists of four separate laboratories specializing in neuropharmacology and neuroendocrinology, brain imaging, clinical psychopharmacology, and genetics and family studies. Training activities of the Division emphasize both research and clinical skills.

4. The Clinical Laboratory and Educational Division at the Menlo Park VAMC is under the direction of Fred D. Gusman, M.S.W. It is built around a 120-bed impatient PTSD and Dual Diagnosis Program that serves as a major site for impatient research protocols, sleep studies, and cross-cultural investigations. Educational activities directed by Joan Furey, R.N., M.A., include developing a variety of multimedia educational materials and formats, audiotapes, manuals, publications, teleconferences, workshops, formal conferences, on-site training curricula, and publication of the quarterly NCP Clinical Newsletter.

5. Although not funded by the National Center, the Northeast Program Evaluation Center (NEPEC) at the West Haven VAMC is programmatically linked with all four Divisions as our Evaluation Division. Under the direction of Robert Rosenheck, M.D., the Division performs ongoing evaluation and monitoring of all VA Hospital-based PTSD programs throughout the nation.

Each Division of the National Center is affiliated with a medical school. This obviously enhances National Center programs and fosters a dynamic reciprocity between the Center and its sister academic institution. The affiliations are as follows: Executive Division/Dartmouth, Behavioral Sciences Division/Tufts, Clinical Neuroscience Division and NEPEC/Yale, Clinical Laboratory and Education Division/Stanford..

During its first two years of operation the National Center has accomplished the following:

(a) It has established itself as a world leader in research on psychological, psychophysiological, and neurobiological aspects of PTSD. Such activities include the development of diagnostic assessment tools, identification of biological markers and testing of effective treatments for PTSD.

(b) Its PILOTS (Published International Literature on Traumatic Stress) computerized bibliographic database has indexed 3,000 titles to date and has an international following of scholars, researchers, and clinicians.

(c) It offers a large number and wide variety of educational materials and programs ranging from published articles, formal presentations at

scientific and training conferences, on-site clinical training opportunities (such as fellowships, internships and miniresidencies), teleconferences, videotapes and consultation regarding education and training.

(d) It publishes two quarterly newsletters, the NCP Clinical Newsletter and the PTSD Research Quarterly, which are widely distributed to VA and non-VA clinicians and scholars.

(e) It carries out ongoing program evaluation of all VA Hospital-based inpatient and outpatient PTSD clinical programs. It also provides education, training and consultation to these programs.

(f) It offers resources and consultation to institutions and organizations outside the VA such as the Department of Defense, State Department, U.S. Coast Guard, Red Cross, World Health Organization and International Society for Traumatic Stress Studies.

(g) It currently carries out gender-related and cross-cultural research programs on the phenomenology and psychobiology of traumatic stress syndromes in women and veterans from different ethnocultural backgrounds. Other projects focus on the impact of childhood trauma on subsequent vulnerability to war-zone stress during adulthood.

(h) Following the California earthquake of 1989, the National Center established a clinic near the epicenter in Santa Cruz, California, that provided prompt and effective support for earthquake survivors and for professionals providing relief services.

(i) In December, 1990 when hundreds of American hostages were released from Iraq and Kuwait, the State Department requested that the National Center coordinate debriefing and therapeutic options offered to these individuals.

OPERATION DESERT STORM

Massive deployment of troops in Southwest Asia, with worst case scenarios predicting tens of thousands of medical evacuees, led to activation of the joint VA/DoD Contingency Plan. The challenge to the VA was to prepare 80 hospitals to receive up to 25,000 medical evacuees within 72 hours of the outbreak of hostilities. National Center staff were immediately thrust into the roles of faculty, advisors on policy, and consultants on acute war-zone psychiatric casualties including combat stress reactions. In that capacity they helped design and implement two large-scale joint VA/DoD training conferences presented at Fort Benjamin Harrison, Indianapolis, Indiana, December 1990 and at the Northport Regional Medical Education Center, January, 1991, to representatives from 80 VA hospitals and 80 Vet Centers as well as to active duty National Guard and military reserve personnel. The National Center continued to provide consultation to VACO and to local VA facilities throughout this period.

Finally, the National Center quickly developed, printed, and distributed its Operation Desert Storm (ODS) Clinician Packet. This booklet, which was produced at the Educational Division, includes original articles written by National Center and guest authors on the clinical approach to assessment and treatment of acute war zone stress. Chapters in the packet include critical incident stress debriefing, acute psycho-social intervention, an integrated

consultation-liaison model, intervention with families, ethnocultural issues, psychopharmacotherapy, and managing helper stress. In addition, the ODS Clinician Packet includes psychometrically-based measures of combat related PTSD and ODS monitoring and assessment materials.

From the perspective of the National Center's educational mission, ODS was significant for a number of reasons:

(a) It provided an opportunity for the National Center to take a leadership role in a time of national emergency;

(b) It demonstrated the need and usefulness of the National Center in this context;

(c) It was an occasion in which professionals from all five divisions collaborated quickly and effectively on a major educational initiative;

(d) It created collaborative educational and research opportunities that are still being developed.

In addition to these ODS-related education, training, and consultative activities, the National Center is currently involved in two large scale research projects on returnees from the Persian Gulf. The first of these is a study by Jessica Wolfe, Ph.D., of over 3,000 ODS returnees who filled out a questionnaire within one day of their arrival at Fort Devens, Massachusetts, after leaving Southwest Asia. The questionnaire included items about war-zone exposure, traumatic stress, coping and social and occupational functioning. A six month follow-up of these respondents is currently in progress. In a second project under the direction of Brett Litz, Ph.D., in collaboration with the VA's Readjustment Counseling Service, we are conducting a questionnaire study of ODS veterans who seek assistance from 70 selected Vet Centers across the country. The questionnaire is a modification of that used by Dr. Wolfe at Fort Devens, so cross-study comparisons will be possible.

As a result of its work with earthquake survivors and ODS returnees, the National Center has expanded its focus from PTSD per se to the broader spectrum of traumatic stress syndromes in general. Furthermore, there is a growing emphasis on the psychological impact of acute exposure to traumatic events. It is expected that these National Center programmatic priorities will create opportunities for further collaboration with DoD, Red Cross, World Health Organization and other institutions.

HOW DEPLOYMENT DISTRESS WAS REDUCED AMONG FAMILIES DURING OPERATIONS DESERT SHIELD/STORM

D. Bruce Bell, Ph.D.
U.S. Army Research Institute
Alexandria, Virginia

This report reviews research on long term and wartime deployments. It is based on multiple reports written between 1968 and the present. To save space, the references have been deleted here but are available directly from the author.

The report has been organized using a modification of Lavee, McCubbin, and Patterson's (1985) model of Army family adaptation to the strains of relocation from the United States to the U.S. Army in Europe (USAREUR). Their model specifies five constructs which predict family adaptation. Two of the constructs are pre- and post-crisis strains or stressors; three are resources used to cope with the stress.

The following sections of the report examine each element of the model in greater detail. First, there is a general discussion of that construct. Next, there is a discussion of research findings before Operations Desert Shield and Desert Storm (ODS/S). Finally, there is a discussion of what Army researchers found during seven research projects carried out during ODS/S. The final section makes recommendations for reducing deployment stress.

STRESSOR ONE: DEPLOYMENT

Family crises are events that place demands upon the family's total coping abilities. Manifestations of family strain include: lowered family integrity, increased stress symptoms, and a reduced sense of well-being or health among family members.

The major family consequences of separations and deployments identified in prior research are spouse loneliness, increased child care responsibilities, and added expenses. Spouses must also adjust to their lack of control over the deployment events and their inability to communicate with the deployed soldier. Deployments that are rapid, dangerous, unplanned, and that eliminate rapid and reliable communication with the soldier, have worse consequences for families than do more routine deployments.

ODS/S research confirmed that lack of control and communications are, indeed, important stressors. Research showed that spouses were concerned about soldiers' living conditions and safety. Spouses were also frustrated by the lack of knowledge concerning the length of the operation and confused by rumors, Army information that often appeared to be out-of-date, and inaccurate coverage of the war by the news media.

Spouses attempted to communicate with the deployed soldier via various electronic media (e.g., faxes) but found that they were neither fast or reliable. Electronic messages were rapidly relayed to South West Asia, but once in theatre, became part of the overtaxed mail system. The most reliable and immediate communication media was the Army telephone system; however, it was only available to a few individuals. The commercial telephone system served more people but was costly and not always available.

Financial difficulties were also documented by the ODS/S researchers. Most families reported that ODS/S strained their budgets, but most could pay their bills. Late pay and loss of civilian income was a problem for the reserve families. Among the active force, loss of spouse jobs (due to economic conditions around Army posts) proved more of a problem than the loss of pay from soldiers' second jobs.

STRESSOR TWO: LIFE EVENTS

Family life events are those major occurrences which increase family stress during deployments. Past research has identified marital distress, pregnancy, difficulties in child rearing, car and household repairs, and confusion over entitlements as "life events" that add to the stress of deployment.

RESOURCE ONE: FAMILY RESOURCES

Family resources are those individual or family assets that either remove the stressors associated with deployments and separations or help the family adjust to the new circumstances. Examples of individual assets that enhance family coping are high skill levels, knowledge, and self esteem. Examples of family assets which increase coping are family cohesion, flexibility, and supportive communication between family members.

In addition, prior research on military families shows that being older, being an officer's wife, having adequate finances, having prior experience with the Army and deployments, and being part of a social network are all associated with higher levels of adaptation.

Family assets that have been identified by research on military families which enhance coping include good communications (within the family and with the soldier during deployment) and having "good" children (i.e., ones that don't stress the remaining parent).

ODS/S research confirmed the importance of these same individual and family characteristics through both interviews and statistical modeling.

RESOURCE TWO: SOCIAL SUPPORT

Social support is defined as the capacity of people or institutions outside the family to help family members feel cared for, valued, or a part of a larger community or network.

Prior research shows that military families prefer support from other military families and military agencies. However, young families without school-aged children or with spouses who are not employed are more likely than other families to return to their families of origin for support.

The ODS/S research confirmed that few spouses "went home." Those who did return, generally fit the profile described above. ODS/S research also showed that civilian communities were quite supportive, particularly small towns.

Prior research shows that pre-deployment briefings were perceived as helpful in getting needed information. Rear Detachment Commands (RDCs) were

107

helpful in resolving pay and other administrative problems. However, the unit-based self-help groups, known as "Family Support Groups (FSGs)," were rated as the most helpful mechanism of all. These findings were supported in ODS/S research.

Pre-deployment briefings were well attended and helpful but: some groups were less likely to attend (e.g., off-post spouses, parents, girl-friends, and ex-spouses). There was also some criticism that the briefings produced an overload of information and confusion about Army entitlements among spouses.

RDCs were found mostly in the active duty force. The numbers of RDCs per post varied widely. FSG leaders and other volunteers found it much easier to assist families if the post retained RDCs at the battalion level or lower. Spouses reported that the RDCs did a good job of making them feel comfortable, providing information, controlling rumors, and helping the FSGs.

FSGs were successful. Both knowledge of and attendance at FSGs was higher during ODS/S than prior to the deployment. FSG activities at most posts consisted of holding informational and social meetings, publishing a newsletter, maintaining a telephone tree, and providing instrumental and social support for unit members. In Europe, most spouses, again, rated this service as the "best service" the Army offered families.

ODS/S families also made use of a newly formed "ad hoc" umbrella organization--Family Assistance Centers (FAC). At the typical post the FAC was found to consist of as many as 12 to 15 agencies that usually provide services to families. Both the number and composition of FACs varied from post to post. Most FACs operated 24 hours a day until the demand for services decreased.

FACs were described as being very successful in coordinating needed services. For example, most FSG leaders said that FACs were helpful to families. However, the USAREUR Inspector General thought that the FACs included in its survey used too many resources for the case load they were serving.

RESOURCE THREE: COHERENCE AND MEANING

The terms "coherence and meaning" refer to a family's framework for making judgements or making events predictable. This framework is the result of the cumulative family coping experiences and can be seen in the degree of confidence the family exhibits in the face of stressful events.

Deployment research shows that spouses who accepted the "fact" of separation, remained optimistic, and became or remained "busy" adapted best. Perez urged spouses to accept that they had no control over deployment events. He asserted that they would adapt better if they concentrated on what they did control--their family's welfare, their jobs, and their finances.

During ODS/S the Army provided many opportunities for spouses to get realistic information. Pre-deployment unit briefings, installation-level briefings, FSGs, and RDCs all provided information to spouses to enhance their decision making ability and improve their understanding of wartime events and its consequences.

OUTCOME: FAMILY ADAPTATION

Family adaptation (or maladaptation) is the result of the family's attempts to cope with the identified stressor (deployment) plus the pile-up of demands from current and previously unresolved family crises (the life events). A decrease in stress symptoms and the ability to meet the demands of daily life indicate that families are adapting. This latter index is often accompanied by the adoption of new routines.

Prior research demonstrated the presence of such stress-related symptoms as headaches, weight change, insomnia, and menstrual irregularity during peacetime deployments. Researchers expected that the incidence and severity of these symptoms would diminish as the stress of deployment diminished over time. If that did not occur, professional help might be indicated. Researchers found that during the deployment stress levels remained consistently high. However, we expect that the stress levels cf families of deployed soldiers will diminish when and if Army life becomes more routine.

Researchers in USAREUR and CONUS found that spouses of both deployed and non-deployed soldiers were able to meet family, work, and social demands despite the uncertain, stressful environment. Officers and NCOs reported that their families were meeting the demands of the Army as well as they had been in peacetime (i.e., during 1989). The most likely explanation for these findings was the high level of social support that was present, particularly for officers and NCOs.

Finally, few USAREUR FSG leaders reported seeing spouses who had "serious adjustment problems."

RECOMMENDATIONS FOR REDUCING DEPLOYMENT STRESS

When considering ways to help families adjust to the stress of deployment, it is important to remember that adaptation is a dynamic process which is influenced by events which are both external and internal to the family system. Families may need different types of support, information and other resources at various points in their coping process. We also must bear in mind that even "well adjusted" families will need support and assistance to cope with severe stress. Army leaders should ascertain that the various resources needed to help families cope are continuously available and that unit leaders and family service providers remain sensitive to the dynamism of the adaptation process.

The recommendations were drawn from the research reviewed and from the general social support literature. These recommendations are summarized using the five predictor elements in the Lavee et al. model.

Deployment strains
The main stressor that spouses can change is the frequency with which they initiate communications with the soldier. Spouses should try to communicate often. If the family can afford it, they should use commercial telephones since that is much more satisfying and efficient. If possible, the Army should try to increase the reliability and reduce the cost of rapid communications.

Life Events

The impact of stressful life events can be reduced by proper preparation. Those families who had care plans, savings, and knowledge of the deployment process, clearly coped better. Having settled into a community before the deployment also helped. The family will have a more established routine and better social networks.

Coherence and Meaning

Several strategies were offered for how to acquire the "proper attitude" and to "cope." They included: accept that you have no control over certain events, concentrate on what you can control, establish new routines, focus on today and stay busy.

Family System Resources

The family can improve its coping ability by maintaining open communications. Family members also can gather needed information though Army channels, reading news accounts, and conducting "research" on the location and activities of the deployment.

Social Support

Family coping can be greatly improved by drawing from the experience and encouragement offered by social networks such as FSGs, RDCs and FACs. The principle recommendation is to become active in seeking social support by contacting friends and relatives, and becoming active in social support groups.

1. PURPOSE (CHARTER)
2. METHODOLOGY (REPORTS REVIEWED)
3. THE MODEL
   a. Deployment strain: definition & findings
   b. Life events: definition & findings
   c. Family resources
   d. Social support
   e. Cohesion & meaning
   f. Adaptation

4. RECOMMENDATIONS
   a. Army
   b. Families
   c. Researchers

This report uses an adaptation of Lavee, McCubbin, and Patterson's 1985 model of family stress and adjustment to organize research findings and recommendations from military deployment literature. The period covered is 1968 through ODS/S. This report is based on an August 1991, presentation to the American Psychological Association convention (Bell & Quigley, 1991). Because of space limitations in these proceedings, the reader is referred to the earlier paper for all references that the two papers share.

Lavee's model contains six elements: five predict how the family will react to the crisis; the sixth is the level of adaptation achieved. Two of the predictors are pre- and post-crisis strains or stressors; three are resources used to cope with the crises.

ARMY MEDICAL RESERVES: READY TO GO?

A. David Mangelsdorff, Ph.D., M.P.H.
US Army Health Care Studies and
Clinical Investigation Activity
Health Services Command (ATTN: HSHN-T)
Fort Sam Houston, Texas 78234-6060

Since 1973, United States armed forces are structured according to a Total Force Policy. In the Army, this means that roughly 75% of the medical assets are in the Reserve Components while the remainder are Active Components personnel. Many Army reserve medical unit personnel were caught up in the turmoil surrounding Operations Desert Shield/Desert Storm. Some reserve units were placed on alert and mobilized, while other units were only warned of possible mobilization.

This report will examine the development of Unit Cohesion Surveys for Army Reserve personnel, the findings of Unit Cohesion Surveys administered to selected Army reserve medical units during training for Desert Shield, the readiness of Army Medical Individual Ready Reserve and retirees, and the results of surveys administered during demobilization of medical reserve personnel in selected Troop Program Units (TPUs) who served in mobilization stations in the United States during Desert Storm.

DEVELOPMENT OF UNIT COHESION SURVEYS

As part of the field training exercises conducted during the summers of 1989 and 1990, several reserve OM (psychiatric detachment) teams administered the Unit Cohesion Index to selected reserve units. The Unit Cohesion Index was administered and collected by the OM teams. Selected units were assessed before and after completion of their training.

The Unit Cohesion Index consists of 20 items using 5-point Likert scales which were modified from the Platoon Cohesion Index (Siebold and Kelly, 1988). For 17 of the items, a 5-point Likert format was employed: "Strongly Agree" (+2) to "Strongly Disagree" (-2).

Analyses of the Unit Cohesion Index results included factor analysis of the 20 items, reliability determinations of the subscales, and analysis of variance comparisons for units which were administered the Unit Cohesion Index on more than one occasion. Evaluations of units by expert observers were compared with the Unit Cohesion Index measures.

Factor Analysis
Responses from the 481 soldiers were submitted to a principal components factor analysis of the 20 items. Four factors with eigenvalues greater than 1.0 were obtained, accounting for 58.3% of the cumulative variance. A Varimax rotation with Kaiser normalization was performed on the factors. Items having an item-total score of .40 and greater were extracted. Three item clusters with at least five items in each were obtained.

Reliability Estimates
The three item clusters were subjected to reliability estimates using the Kuder Richardson procedure to calculate coefficient alpha. The coefficient

alphas for the separate scales were: scale 1 (8 items) was .891; scale 2 (7 items) was .805; and scale 3 (5 items) was .760. The scales were labeled as follows - scale 1 (leaders), scale 2 (new members), and scale 3 (unit cohesion).

Test-retest Reliability Estimates

Complete data sets of the 20 items in the first and second administration Pearson Correlation Coefficients were determined for the three scales of from 109 reservists were examined for test-retest estimates. The Pearson Correlation Coefficients were Scale 1, $r = .925$; Scale 2, $r = .859$; Scale 3, $r = .796$; and Unit Cohesion Index, $r = .934$.

Level of Unit Cohesion

Scores for individual units on the three scales were evaluated. The mean scores for all units indicated perceived satisfaction with the units and moderately high degrees of unit cohesion. Units that had high levels of unit cohesion were also the units recognized by the expert observers as performing quite well during the training exercises.

Analysis of Variance Comparisons

Comparisons were made on the scales for units which had taken the Unit Cohesion Index before and after the training. Of the four units on which comparisons were made, there were significant differences for two units on scale 3 (Unit Cohesion). For one unit, there was a significant difference for scale 1 (Leaders), with the unit being more dissatisfied after the training exercises. This same unit showed a significant drop in scale 3 (Unit Cohesion) as well. For the units that had lower scores (greater unit cohesion) before training, even more unit cohesion was reported after the training exercises. More extensive discussions of the findings are available (Mangelsdorff, Stokes, & Jacobs, 1990; Jacobs, 1990).

UNIT COHESION IN AMEDD RESERVES DURING DESERT SHIELD

The Unit Cohesion Index was administered during training drills in December 1990 and January 1991. Four units were surveyed: 350th Evacuation Hospital, 2291st General Hospital, 13th Evacuation Hospital, and the 383rd Med Detachment (Psychiatric). The findings showed the scores reported for all units indicated perceived satisfaction with the units and moderately high degrees of unit cohesion. The smaller units reported the highest levels of unit cohesion.

SURVEYS OF RESERVE COMPONENTS ARMY MEDICAL PERSONNEL

Headquarters, U.S. Army Health Services Command (HQ HSC) and the Academy of Health Sciences (AHS) requested assistance in the development and scoring of questionnaires to assess attitudes of Army medical department (AMEDD) personnel in the Individual Ready Reserve (IRR) and retired reservists (Mangelsdorff, Twist, Moses, Decker, & Hansus, 1991).

Subjects

Survey packets were sent from AHS to individual reservists during summer and fall 1990. For the IRR personnel, 25,500 surveys were sent. For the retired reservists, 12,800 surveys were mailed.

Procedure

Forms were color coded for officers and enlisted personnel as well as for IRR and retirees. Postage paid postcards were printed with the survey items. Surveys were returned to AHS for collection. Surveys were then edited for analyses.

INDIVIDUAL READY RESERVE SURVEY

Usable surveys were received from 3,782 enlisted and 4,775 officer personnel. Other surveys were returned of which 500 were unusable and 4,275 were undeliverable. Personnel were grouped according to rank (officer versus enlisted).

While IRR officers reported the skills necessary for their civilian jobs were the same as their AMEDD specialty (48.6%), the enlisted reported their civilian skills were different (58.3%). The officers were more likely to report being proficient in performing in their military specialty (76.3%). Officers maintained their licensure/registration in their specialty (78.0%) more than enlisted (24.2%). The officers had acquired new skills which would enhance their military performance (47.2%). The current health/ability to perform duties was reported as good/excellent by 86.7% of officers and 77.2% of the enlisted. The last physical exam was within four years for 84.6% of the officers and 91.0% of enlisted. Those qualified for a mobilization exemption included 29.8% of officers and 37.6% of enlisted. Similarly, those not able to report if mobilized were 23.8% officers and 27.1% enlisted. During the last four years, 60.0% of officers and 66.5% of enlisted had participated in military/medical training. The training was reported as valuable/very valuable to skills by 87.0% of officers and 77.4% of enlisted.

RETIREE RECALL SURVEY

Of the 4,093 retired officer surveys sent, 3,414 were returned. Of the 8,707 enlisted retiree surveys mailed, 6,084 were returned. An additional 982 surveys were undeliverable and 280 were unusable. Personnel were grouped according to rank.

Among the retired recall respondents, only 25% of the enlisted and 47% of the officers had retired/separated from the military within the last five years. The retired officers reported the skills necessary for their civilian jobs were the same as their AMEDD specialty (43.9%), the enlisted reported their civilian skills were related (61.2%). The officers reported being more proficient in performing in their military specialty (77.0%). Almost 75% had recall (hip pocket) orders. The officers were more ready to perform medical duties without a train-up period. Officers maintained their licensure/registration in specialty (55.7%) more than enlisted (19.5%). Neither group had significantly acquired new skills. The current health/ability to perform duties was reported as good/excellent by 80.0% of officers, but only 66.0% of enlisted. If mobilized, 90% of both officers and enlisted were able to report. Those qualified for a mobilization exemption included 18.6% of the officers and 28% of the enlisted.

SURVEY OF MOBILIZED RESERVE COMPONENTS ARMY MEDICAL PERSONNEL

Headquarters, U.S. Army Health Services Command (HQ HSC) requested assistance in the development and scoring of a questionnaire to assess

attitudes of reserve Army medical personnel mobilized to stations in continental United States during Operation Desert Storm. The completed report details the findings (Mangelsdorff, Twist & Moses, 1991).

Survey packets were sent from HQ HSC to installations where reserve units were demobilizing. Survey responses were received from 3,930 reservists. The sample was 58.6% male, 15.7% dual family member, and 59.4% married. Personnel were grouped according to rank, years of service, occupational specialty, and reserve category (Troop Program Unit, Individual Mobilization Augmentee, Individual Ready Reserve).

The sample was predominantly from Troop Program Units (88.0%). In general, the reservists were pleased with their experiences, though there were significant concerns expressed about the lack of communication and information provided. The fragmentation of units was not adequately explained.

When there was communication from the parent unit, there was more likely to be communication from the installation, and support from the parent unit. Apparently, reservists from units that provided the information were well prepared and felt they contributed to the mission.

The reservists were eager to serve their country. The soldier's participation was supported by the spouse. Since 59.4% of the sample were married, having family support is important. The support of the spouse was critical in soldiers planning to remain in the reserves until eligible to retire.

Soldiers who felt they were well utilized during mobilization were likely to report their contribution to the mission was significant and that they were given responsibilities commensurate with their rank and expertise. The reservists felt part of the active Army medical team at the receiving units.

DISCUSSION

As the United States Army involves its Reserve and National Guard units more in Total Army efforts, it becomes important to assess the morale and cohesion of Reserve and Guard units. Mangelsdorff (1988) has examined unit climate and morale in some state guard units; the levels of morale were comparable to those of active duty units.

In the present studies, a survey instrument which had acceptable psychometric properties was developed. The level of cohesion found with the Unit Cohesion Index in the reserve units was at least as high as that obtained in active duty units using the Platoon Cohesion Index. The Unit Cohesion Index was sensitive to detecting high levels of cohesion and positive unit attitudes in some of the units which performed well.

The Unit Cohesion Index was administered in training drills in medical units notified to be ready to be mobilized to support Operation Desert Shield. The findings showed the scores reported for all units indicated perceived satisfaction with the units and moderately high degrees of unit cohesion.

Of those responding to the IRR survey, most IRR AMEDD officers had maintained their ability to perform in their military medical specialty and reported their current health/ability as good/excellent. Most IRR officers had

participated in military/medical training. Most IRR personnel had maintained the licensure/registration in their specialty and some had acquired new skills. Enlisted IRR respondents reported lower percentages of readiness and higher numbers not being able to report/perform their duties if mobilized.

Similar findings were reported in the Retiree Recall survey, though the retired reserves indicated even less preparedness if mobilized than the IRR personnel. Of particular concern were the percentage of retired enlisted in less than good/excellent health, those lacking current training, or having mobilization exemptions.

The responses indicated most IRR and retirees were generally ready to perform in their military specialties if mobilized. However, there could be problems if large numbers of reservists and retirees were mobilized for active duty.

In the survey of reservists being demobilized after Operation Desert Storm, the sample was predominantly from Troop Program Units (88.0%). In general, the reservists were pleased with their experiences, though there were significant concerns expressed about the lack of communication and information provided. The fragmentation of units was not adequately explained.

When there was communication from the parent unit, there was more likely to be communication from the installation, and support from the parent unit. Apparently, reservists from units that provided the information were well prepared and felt they contributed to the mission.

The reservists were eager to serve their country. The soldier's participation was supported by the spouse. Since 59.4% of the sample were married, having family support is important. The support of the spouse was critical in soldiers planning to remain in the reserves until eligible to retire.

Soldiers who felt they were well utilized during mobilization were likely to report their contribution to the mission was significant and that they were given responsibilities commensurate with their rank and expertise. The reservists felt part of the active Army medical team at the receiving units.

What these studies describe are some of the positive and negative aspects of Army medical reserve components personnel. As unit members, reserve personnel report pride and unit cohesion. Reservists reported to have maintained their professional and military skills; the majority reported being ready if mobilized. After being mobilized, some attitudes changed. As reported during the demobilization process, there were a number of dissatisfiers particularly with respect to the fragmentation of units, redistribution of personnel, financial losses associated with mobilization, and the inadequacy of communication of information. These factors may affect the decisions to resign or remain in the reserves. Army leadership will have to address these concerns.

REFERENCES

Jacobs, H. (1990). Further examination of the Unit Cohesion Index. (Consultation Report #90-003). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

Mangelsdorff, A.D. (1988). Texas National Guard: Unit climate survey pilot project. (Consultation Report #88-004). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

Mangelsdorff, A.D., Stokes, J.W., & Jacobs, H. (1990). Cohesion in Army reserve units. In Proceedings, Psychology in the DoD, 12th Symposium, April 1990, USAFA-TR-90-1, pp. 303-307. Colorado Springs, CO: USAF Academy Department of Behavioral Sciences and Leadership.

Mangelsdorff, A.D., Twist, P.A., & Moses, G.R. (1991). Survey of mobilized reserve components Army medical personnel. (Consultation Report #91-008). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

Mangelsdorff, A.D., Twist, P.A., Moses, G.R., Decker, S.R., & Hansus, S. (1991). Surveys of reserve components Army medical personnel. (Consultation Report #91-009). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

Siebold, G.L., & Kelly, D.R. (1988). Development of the Platoon Cohesion Index (PCI). Alexandria, VA: Army Research Institute.

ARMY MEDICAL DEPARTMENT RESERVE PERSONNEL
MOBILIZED IN SUPPORT OF OPERATION DESERT STORM

Gerald R. Moses, Ph.D.
Senior Army Reserve Advisor
HQ, U.S. Army Health Services Command
Fort Sam Houston, TX 78234-5000

The United States Army Health Services Command (HSC) is a major command which supports the medical needs of soldiers in peace and war and unifies Army Medical Department (AMEDD) resources in the Continental United States (CONUS) and several select overseas locations. Before Operation Desert Storm, the HSC wartime mission entailed provision of health care personnel through the Professional Officer Filler System (PROFIS), examination and treatment of soldiers preparing to deploy, and preparation to receive casualties from the theater of operations. At the beginning of Operation Desert Shield, HSC retained the previous missions and was directed to assume the additional mission to maintain health care to soldiers and beneficiaries in the CONUS base. The new mission caused the early use of volunteers and prompted the mobilization of reserve units and individuals.

At the time of arrival of reservists at mobilization stations, HSC requirements had changed considerably from previously planned missions. The need to backfill PROFIS deployers at several rather than a few locations and the unexpected amount of taskings for medical filler personnel caused reserve units to be mobilized incrementally and unit personnel to be dispersed throughout CONUS, to Europe, and to Southwest Asia. Many perceived that previous assurances were not honored as these related to unit integrity, mobilization site, and utilization in a duty assignment. The fragmentation of units and redistribution of unit personnel caused considerable distress to mobilized reservists. The distress was compounded by individual instances of personal and professional unpreparedness for mobilization. Personal factors included failures to comprehend the possibility of a call to active duty, to have existing family care and business care plans, and in some cases to meet physical and medical mobilization standards. Professional factors included instances of incomplete medical credentials packets, mismatch of designated skill identifiers to mobilization requirements, shortages of critical skill personnel in units and failure to complete military training required for deployment.

The impact of the mobilization of health care providers was felt by the civilian medical community, by patients of solo practitioners, by partners of providers, by employers, and by providers themselves. These impacts, in conjunction with the fragmentation of units and redistribution of personnel caused a dissonance audible to the Department of Defense, the Department of Army, reserve components leaders, and the media. Speculation about "medical meltdown," the massive resignation of reserve health care providers, prompted the need for an objective assessment of the extent of potential loss of critically needed members of the reserve force.

During Operations Desert Shield and Desert Storm, more than 10,000 reserve personnel from 53 units were mobilized in support of the HSC mission. The units ranged in size from 700-person augmentation hospitals to small detachments of laboratory, veterinary, blood collecting, and preventive

medicine teams. Reserve medical personnel from several tables of organization and equipment hospital units were cross-leveled into two of the augmentation hospitals to increase the number of health care providers available to support the CONUS medical base or to be levied for OCONUS deployment.

In general, the concerns of Army leaders about an increase in resignations of medical practitioners following Desert Storm appear to have been warranted. Nothing like a "meltdown" has occurred; but the number of requests for separation from the reserve components has grown and appears to be directly related to mobilization. The Army Reserve Personnel Center (ARPERCEN) reported for FY 91 18,000 requests for resignation of which approximately 1,100 came from AMEDD officers (Report of Resignations Received, 1991). Many of those requesting resignation reported either ignorance of their risk of mobilization or the suffering of dramatic business loss as a result of it. Table II depicts the number of resignation requests received by ARPERCEN for FYs 89 through 91 for each corps of AMEDD officers. The figures for FY 89 reflect the outcome of an involuntary muster of reserve soldiers and of the publication of newsletters reminding reservists of their status and obligation to respond to mobilization. The FY 90 data show a typical number of resignations unprovoked by muster or mobilization, while FY 91 figures are related to mobilization.

Significant negative aspects of the mobilization experience were reported in three discrete categories: (a) the effect of fragmentation of units and redistribution of personnel, (b) the suffering of financial loss associated with mobilization, and (c) the inadequacy of communication of information. These dissatisfiers are recognized as related to decisions to resign or remain as an active reservist.

Nearly one-third of the respondents reported a strong negative impact from one or more categories of dissatisfaction. For many, the fragmentation of the unit upon mobilization damaged the integrity of the unit, weakened the credibility of the Army and its leaders, and represented "broken promises" about the mission of the unit. Many personnel essential to the management of unit personnel and their records were left behind. Inprocessing problems worsened due to the absence of the right persons to affect a smooth transition to active duty. The absence of senior enlisted supervisors undermined the confidence of enlisted soldiers and contributed to subsequent mishandling and poor treatment by active component personnel who did not understand nuances of reserve systems. Redistribution of individuals from their parent unit increased the sense of separation from the anticipated mission and from comrades, and produced a profound increase in personnel, pay, and billeting problems. Those who were redistributed to secondary mobilization sites and then used as filler personnel for deploying units experienced the most of the worst problems associated with the mobilization. Junior enlisted personnel comprised the majority of reservists so utilized.

Many health care providers, particularly physicians, suffered appreciable financial loss from mobilization. Those in solo practice experienced high rates of bankruptcy and business failure. Some had discharged employees, terminated leases and business contracts, and referred their patients to other providers. The hero's welcome home did not include the happy return of employees, contractors, and patients. Those in partnerships returned to disgruntled partners tired of carrying the entire caseload and financial burden of the practice. Medical reservists discovered an appreciable difference in pay from active component counterparts due to the bonus and

special pay incentives for selected specialists. Physicians and other health care providers also risked medical liability arising from the treatment of patients prior to mobilization. This risk caused the continuation of payment of expensive medical malpractice insurance in spite of considerably reduced income.

Associated with the changing mobilization mission and transcontinental reassignment process was the issue of communication of information. Reservists whose parent unit, active agency of assignment, and mobilization installation provided timely, updated information responded well to mobilization. Moreover, problems with records, pay, billeting, and duty assignments tended to be overcome satisfactorily if communication of information was forthcoming. The reverse was true in the extreme. Poor communication exacerbated some problems and generated others. The lack of information was perceived by reservists as evidence of an Army system which was blind to their needs and cared little about them. The presence or absence of communication and the attendant success or failure of Total Army integration was directly attributable to leadership, that of the reserve unit, the active component agency of assignment or of the installation. This survey and Army lessons learned indicate that effective communication may be the single most important factor related to mobilization of reserve soldiers.

INITIATIVES TO ADDRESS DISSATISFIERS

As significant dissatisfiers associated with mobilization became known during Operations Desert Shield and Desert Storm, some solutions were initiated by Congress, the Department of Defense, and active and reserve Army agencies. Lessons learned have indicated the need for changes in laws, regulations, and policies. Currently, necessary legislative and regulatory changes are either in place or in development.

The Office of The Surgeon General (OTSG) and HSC are fully cognizant that future mobilizations will permit no degradation of peacetime levels of military health care in spite of wartime missions. It is recognized also that medical reservists can not tolerate fragmentation of units and massive redistribution of personnel. Therefore, a top-to-bottom adjustment of CONUS-based force structure is being proposed. The Individual Mobilization Augmentee (IMA) program will be used to provide personnel to backfill PROFIS deployers. The early mobilization of these assets should permit maintenance of health care at all medical treatment facilities (MTFs) from which PROFIS personnel emerge. The wartime missions of mobilization station medical support, reconstitution of medical staff from the deployment of enlisted fillers, and preparation to receive casualties will be augmented from reserve medical units aligned to MTFs. There is increased likelihood of adherence to planned mobilization missions and reduced likelihood of personnel turbulence during the mobilization process.

Solutions to the problem of financial losses upon mobilizations have been initiated and continue to be developed. Congress has enacted support for malpractice tail insurance and payment of bonuses and special pays to mobilized reservists. The development of a business care plan, similar to the family care plan required by each reservist, will enhance awareness of the reality of a mobilization and provide guidance for protection of practices and businesses through careful planning.

119

The importance of effective communication during the mobilization process presents a challenge to the Army leader development process. The intelligent management of personnel assets remains the responsibility of commanders, many of whom require more comprehensive training in this arena. Lessons learned from the latest mobilization should be incorporated into every level of leader development.

REFERENCES

Mangelsdorff, A.D., Twist, P.A., & Moses, G.R. (1991). Survey of mobilized reserve components Army medical personnel. (Consultation Report #91-008). Fort Sam Houston, TX: Health Care Studies and Clinical Investigation Activity.

United States Medicine, Vol. 27, No. 15-16, August 1991.

Report of Resignations Received, ARPERCEN Report, July 1991.

TABLE 1

RESIGNATION REQUESTS BY AMEDD CORPS FOR THREE FISCAL YEARS

Corps	FY 89	FY 90	FY 91
NC	220	82	429
DC	115	28	115
MC	198	99	435
MS	149	45	68
PA	7	3	14
AMSC	16	4	11
VC	18	6	4
Totals	723	267	1076

Notes:

    Corps codes:

        NC nurses

        DC dentists

        MC physicians

        MS medical service corps

        PA physician assistants

        AMSC Army medical special corps

        VC veterinarians

STRESS DURING THE EARLY PHASE OF OPERATION DESERT SHIELD: OBSERVATIONS OF THE WRAIR STRESS EVALUATION TEAM

Robert K. Gifford, Ph.D., James A. Martin, Ph.D., and
David H. Marlowe, Ph.D.
Walter Reed Army Institute of Research
Washington, DC

When United States forces deployed to Saudi Arabia in August 1990, many senior Army leaders were concerned about the psychological stress that would be created by this high-threat deployment to a harsh environment. To learn more about the stress of the deployment and how soldiers were adapting, the Deputy Chief of Staff for Personnel, Lieutenant General William Reno, requested that Dr. David H. Marlowe, Chief, Department of Military Psychiatry, Walter Reed Army Institute of Research (WRAIR), take a research team to Southwest Asia (SWA) to study the deployment first hand. The authors conducted their initial assessment of stress issues in the SWA theater from September 22 through October 6, 1990.

METHODS

More than 500 deployed soldiers, ranging in rank from private to lieutenant general, took part in semi-structured interviews. Interviews were either individual or done with groups of less than 10, and were held in soldiers' work or living areas. Those interviewed in groups were always seen with other soldiers of similar rank, without their supervisors' being present. When possible, the interview program included different organizational levels from a given unit (e.g., within a battalion, the commander, command sergeant major, company commanders and first sergeants, platoon leaders, platoon sergeants, squad leaders, and squad members were interviewed in succession). When operational or time constraints made it impossible to be comprehensive within a unit, enlisted soldiers and junior NCOs were interviewed rather than the senior leaders.

The units visited included maneuver battalions from each of the three divisions then established in SWA, as well as support and headquarters units. The selection of the units to be visited ensured that the team saw those units that (a) had been in SWA the longest, (b) were the most forward deployed, (c) lived under the most austere conditions, or (d) had missions judged particularly stressful by their higher headquarters.

FINDINGS

Morale and Cohesion
At the time of the team's visit, morale in the SWA theater was generally good and small unit cohesion was high. Soldiers were enduring the uncertain situation and difficult living conditions well. This is not to say that they did not find these conditions stressful; on the contrary, most soldiers had complaints about a variety of issues related to the deployment. However, further questioning usually revealed that they were functioning extraordinarily well given the circumstances under which they were operating, in spite of their frustration with primitive living conditions and separation from family and friends.

Where there were problems in either morale or cohesion, they could generally be traced to factors that existed before the deployment. Units in which there were deficiencies in trust or communication up and down the chain of command prior to Operation Desert Shield (ODS) in most cases did not improve as a result of deployment. On the contrary, during the first months of ODS the stresses and intense contact incident to deployment often exacerbated problems that had existed in CONUS. Similarly, individual problems that existed before the alert continued or became worse after deployment. While such instances of isolated low individual morale or weak unit cohesion are distressing to the soldiers involved, they do not detract from the more important observation that the majority of military units and individual soldiers were coping well in a highly stressful environment.

Several factors worked to enhance unit cohesion. Among the most important were the potential threat and the process of living and working together 24 hours a day in a hostile environment. Horizontal cohesion developed rapidly and powerfully. As one squad put it: "Our closeness to each other keeps us going. We share letters, share everything. We are 100% behind each other." The cohesion was reinforced by good vertical bonding. As this same squad put it, "Our platoon sergeant, he's really good, he's military in the best sense. He really cares, he give us time, he talks to us, shows us consideration and treats us like adults..."

Adaptation to Operation Desert Shield

Overall, Army units did an exceptional job of ensuring their soldiers' successful adaptation to a harsh and alien environment. Several problems that many had expected either did not materialize or were well controlled. For example, the process of acclimatization and heat adaptation went quite well, judging from the fact that very few heat casualties were reported and commanders did not cite heat casualties as a major problem. Units ensured adequate hydration of soldiers and devoted their first few days in Saudi Arabia to acclimatization, starting with moderate work schedules and increasing workload at reasonable rates. Most soldiers reported that it took about a week to "acclimatize and really be able to take the heat."

The success of the hydration program was significantly enhanced by the extensive use of Saudi Arabian bottled water. The convenience and wide availability of this water, combined with its pleasant (or at least neutral) taste made it popular with soldiers. Soldiers typically carried a bottle of this water and sipped from it as they went about their duties--the ideal way to achieve hydration. Indeed, the Saudi plastic water bottle may be one of most pervasive and remembered symbols of Operation Desert Shield.

Sleep discipline also contributed to successful adaptation. Most units had command policies that ensured that soldiers got adequate sleep. The major exceptions were higher headquarters and certain support units. In both cases, extreme work demands were not matched by sleep discipline. The result was that individuals, including key leaders and staff, experienced chronic sleep deprivation. Ironically, as time went on, even though the work load may have decreased somewhat, exhausted individuals were still putting in as many hours because it took sleep-deprived people longer to complete any cognitive task.

The absence of alcohol in the theater did not appear to have caused any serious behavioral or medical problems. On the contrary, the absence of alcohol was cited by both leaders and soldiers as a major factor in the

excellent safety record achieved by the Army in the deployment. There was no significant problem with "closet" alcoholics' having adverse reactions to enforced abstinence. Medical evacuation records showed only two soldiers who been evacuated from the theater because of symptoms of alcohol withdrawal as of the beginning of October.

Male-female work relationships were another example of successful adaptation to the Desert Shield deployment. Women, especially those working in urban areas where there was a likelihood of contact with Saudi civilians, had to adjust to a number of cultural constraints to which their male peers were not subject. However, in the early days of Operation Desert Shield, they faced these constraints with good humor. Even more importantly, they received social support from the males in their units. For example, in some units where women were required to keep their uniform blouses on in the workplace, the men voluntarily followed suit.

In a number of cases men and women in the same units lived together under crowded conditions in tents or warehouses. The women interviewed did not report sexual harassment from members of their units. As one young soldier said, "we know their wives and girlfriends, so we don't expect trouble." Most women said that if sexual harassment did become a major issue in the future, it would be from men in other units, not theirs. Soldiers devised simple solutions to issues of privacy (e.g., hanging blankets to create areas for changing clothes). Again, the distinction between men in one's own unit and "outsiders" was important. There had been instances of men lurking around female shower areas, but these always involved men from outside the primary work group, and often the solution was to be escorted by men from one's own unit. Several women stated that they preferred living in the same quarters as the men in their units to the possibility of living in separate, all female, quarters with members of other units.

Stressors
The period under discussion was one of transition, and, to understand the stresses on soldiers, one must appreciate that they did not have crystal balls to tell them that in a few months there would be a war or that they would be part of the liberation of Kuwait. The force had deployed to deter an attack on Saudi Arabia, and they had succeeded in that so far. The announcements that the Coalition would consider offensive action to force Iraq out of Kuwait, that United States forces were there for the duration, and that the United Nations would authorize use of force after January 15, had not yet occurred. Thus, at that point, the deployed force was continuing to move into defensive positions in the desert, but for how long or to what end was not yet clear.

Under such circumstances, it was no surprise that the most commonly--and intensely--cited stressor for soldiers of all ranks was the uncertainty of the tour length. Having no idea how long they would be in Saudi Arabia, and with no combat imminent, soldiers were frustrated because neither they nor their families could make any reasonable plans. As one put it, "This is like a long pause on the VCR of life." In the absence of a decision regarding tour length, soldiers had developed a general expectation that the tour length should be 6 months. However, most stated that any definite tour length would be preferable to the uncertainty that ruled their lives at that point.

The uncertainty was compounded by the ambiguous demands placed on soldiers as commanders simultaneously prepared for possible combat and for prolonged

124

deployment without combat. These two tracks were sometimes in conflict, and led to inconsistent or confusing demands on soldiers. For example, soldiers in some units were required to wear Kevlar Helmets at all times--even to the latrine at night--in order to be combat ready, but were not training for likely combat missions, and were not given ammunition when on guard, even though they were frequently warned of the terrorist threat.

Soldiers also suffered from isolation from the outside world. Mail service was slow and erratic (letters typically took 10 days to get to Saudi Arabia, but it was not uncommon for them to take over 3 weeks). Most soldiers, except those at senior headquarters units in urban areas, had no access to telephones and were able to call their families only if the unit received word of some type of family emergency that justified the time-consuming measures necessary to get a soldier to a telephone. While special programs to get easy phone access to soldiers were appreciated by the few soldiers who could take advantage of them, for the majority of soldiers the availability of phones was extremely limited until much later in ODS.

This isolation extended to news media access as well. Soldiers in forward units got newspapers several days late, if at all, and could get current news only from BBC radio and Iraqi propaganda broadcasts. These soldiers frequently cited lack of information about events in the Gulf and operational information, as well as about such mundane issues as sports news, as a stressor. As members of one squad put it, "The only thing we know is that we are somewhere in Saudi Arabia and Iraq is north. We don't know where we are at or what is going on. We don't know who's in front of us, what Saddam is doing or what the President is doing. All we have are rumors." Unit commanders recognized the problem, and some were quite skilled at establishing mechanisms to get information to the soldiers. However, often the unit commanders themselves did not have good access to news.

Living under these austere conditions was made more stressful by the fact that units were together, usually under conditions of either crowding or isolation, 24 hours a day, 7 days a week. While military units are accustomed to this for periods of a few weeks, most of these soldiers had never before lived with no respite from the chain of command for so long, especially having no end in sight. In the early days of ODS, even if the mission allowed a day off (which in practice usually meant a few hours off and relatively light duty the rest of the day), there was no place for soldiers to go where they could be away from their leaders, or relax without being under scrutiny and subject to "hey you" details. Both soldiers and leaders badly needed private time when they could be away from role demands for a few hours.

CONCLUSIONS

The preceding observations are not presented as a definitive view of life in the Southwest Asian theater. Rather, they are snapshots of the early development of a rapidly evolving theater as the United States deployed forces on a scale much larger than had been done in recent years, to an area with which most Americans had little familiarity, in an uncertain and tense situation. Many of the stressors noted in this report were ameliorated later on, either by the normal maturation of the theater, as goods and services became more available, or by conscious corrective actions on the part of military leaders.·

On the whole, the U.S. Army units studied in this assessment had done a remarkable job of coping with the stresses of this difficult operation. Future reports from the WRAIR will address what factors made this success possible, how the maturing theater and the war affected the continuing adaptation, and the effect of Operations Desert Shield and Storm on soldiers and units today.

STRESS CASUALTIES OF OPERATION DESERT STORM

Laurent S. Lehmann, M.D.
Department of Veterans Affairs
Washington, D.C.

This paper describes the response of the Department of Veterans Affairs (VA), Mental Health and Behavioral Sciences Service (MH&BSS) to the challenges presented by the Persian Gulf War. The VA-DoD Contingency Plan will be discussed with a detailed description of the training programs that were implemented for VA clinicians in preparation for dealing with the mental health needs of Gulf War casualties. Ongoing VA clinical screening and treatment programs and their preliminary findings will be noted. All of these activities were characterized by coordination, not only among several VA clinical services (Mental Health and Behavioral Sciences Service, Readjustment Counseling Service, Social Work Service) but also between VA clinicians and their DoD colleagues. This collaboration is a continuing feature of the evaluation and care of Gulf War returnees that should result in improved continuity and quality of care for these veterans.

The VA-DoD Contingency Plan

The VA-DoD Contingency Plan was created in 1983 by Public Law 97-174, Sec. 5011A, and a Presidential Executive Order establishing the National Disaster Medical System (NDMS). In addition to providing clinical care for veterans and promoting education and research to advance veterans' health care, VA now had the "4th Mission" of providing back-up medical care to the Department of Defense in time of war.

As Operation Desert Shield/Desert Storm progressed, VA entered a hectic period of planning and coordination to meet its responsibilities under the Contingency Plan. VA's Office of Emergency Medical Preparedness (OEMP) directed the creation of Standard Operating Procedures for VA Central Office for the four Regions into which VA's nation-wide medical care services are administered, and for the medical centers. Educational programs were developed in the form of teleconferences and workshops for VA clinicians in the management of medical, surgical and psychiatric disorders that might be found in returning casualties from the Gulf War.

The Contingency Plan called for the identification of 80 VA Medical Centers (VAMCs) across the nation as Primary Receiving Sites for incoming casualties related to six major U.S. Air Force bases in the eastern, central and western United States. The Primary Receiving Sites were mostly tertiary care centers, highly affiliated with medical schools and other health care training institutions. Each Primary Site had a surrounding ring of VAMCs designated as Secondary Receiving Sites. In case of Contingency Plan activation, VAMCs would discharge as many patients as they could, opening an estimated 12,000 beds in 24 hours. This process would include "lateral transfers" of patients from Primary to Secondary Receiving Sites and to community hospitals. VA, as well as other health care providers, also faced the consequences of the call-up of clinicians and support staff into the National Guard and Reserves. A total of 3,022 VA personnel were called into Reserve or Guard duty during the Gulf War. Three hundred and two of these were physicians, and 30 of the physicians were psychiatrists.

In fact, the Contingency Plan was never activated. Everything that was done in terms of training, clinical planning, and support for DoD (particularly for DoD Family Services, whose staff in the United States was markedly diminished by those called for service in the Gulf) was carried out independent of, and in preparation for, an order that never came.

VA Education Initiatives in Preparation for Gulf War Casualties

Educational and clinical planning activities proceeded on parallel tracks with close VA-DoD collaboration as a feature of both. OEMP, working with VA's Office of Academic Affairs, whose Regional Medical Education Centers are responsible for continuing medical education of VA staff, created a series of workshops to prepare VA clinicians for the types of casualties they might receive from the Gulf. The workshops were attended by clinicians from the 80 Primary Receiving Sites. The medical-surgical training focused on management of physical combat trauma, chemical wounds, and the infectious diseases endemic to the Persian Gulf Theater with a brief presentation on traumatic stress reactions.

The mental health training program entitled "Interventions in Traumatic Stress: VA/DoD Contingency," was presented to a total of 240 clinicians, two from each of the Primary Receiving Sites and one from a VA Center associated with that Site. In addition to the training at the workshops, a Training Manual and a videotape series made from the live presentations were created to aid future training. The second of the two Traumatic Stress Workshops ended on February 22, 1991, with a satellite teleconference for the staff of the Primary Receiving Sites who could not attend the workshops and for staff from the Secondary Receiving Sites. The satellite broadcast was seen at 117 VAMCs and had 1,600 participants. An Operation Desert Storm Clinician Packet containing papers on the workshop presentation was compiled by VA's National Center for PTSD and sent to all VAMCs and VA Centers. The goal of completing our training before the land war began was achieved.

Mental Health Issues from ODS Workshops

In addressing the mental health needs of Gulf War troops, among the first issues noted were the differences of this war from Vietnam (i.e., the presence of public support, the short time frame involved in deployment, and anticipated brief, intense armored battles as opposed to a long term "low intensity" war). The troops were different, too: a volunteer Army; an older, more married Army with increased numbers of women and new roles for women and members of racial/ethnic minority groups. Nineteen percent of the Gulf forces were from Reserve and Guard units suddenly called to action.

Special areas of concern were noted—the harsh, unfamiliar desert environment with its heat and sand, for example. The isolation of U.S. troops from the local population whose customs were starkly different from our own and even from those east Asian peoples we have come to know, to a degree, since the WWII-Vietnam eras. There were concerns about new types of warfare, the physical and psychological effects of chemical/bacteriological warfare, the psychological impacts of massive burns and amputations, and the anticipated outcome of large scale tank battles. There were also concerns about the impact of the war on our veteran patients already suffering from Post-traumatic Stress Disorder (PTSD).

The training was not focused solely on PTSD because it was anticipated that there would be a range of stress reactions among psychiatric casualties

128

including brief reactive psychoses, adjustment disorders, and unusual presentations of other major and minor psychiatric illnesses. The DoD conception of Battle Fatigue as a type of normal reaction to the extreme stressors of combat fits into the perception of PTSD as the pathological expression of what were once adaptive coping mechanisms.

This perception of the disorders that would be seen formed our principles of evaluation and treatment of psychiatric casualties: do not diagnose precipitously, do not medicate precipitously. A "debriefing" approach was suggested similar to that used with disaster victims and the survivors of the bombing of the Beirut Marine barracks described by Mateczun and Holmes-Johnson (Proceedings of the Fourth Users Stress Workshop, 1985). This technique allowed recognition of emotions associated with the stressor and development of a cognitive grasp of the stress event in the context of support from peers with similar experiences. There was an emphasis on awareness of the needs of families including families of deployed troops currently experiencing psychological, social or economic distress. Also, families of the wounded would have to be made aware of their loved ones' injuries in a sensitive manner to bring them, as much as possible, into a helping role in the recovery process.

Clinical Coordination During ODS.
    The preparations for VA participation in case of activation of the Contingency Plan have been mentioned above. In VA Central Office, a Clinical Affairs ODS Committee was created. A major accomplishment of this group was the creation of a "clinical inventory" of medical, surgical, psychiatric, and rehabilitation capabilities for the designated VA Primary Receiving Sites. This inventory was used to assist in decisions about patient transfers to those facilities best able to meet the patient's needs. Forty-five percent of the Primary Receiving Sites (36/80) had established PTSD treatment programs before the war.

An ODS Mental Health Field Working Group was formed with VA and DoD membership. This is an ongoing group whose purpose is planning, coordination and consultation for clinical and educational activities related to ODS. Dissemination of a list of existing PTSD programs with names, addresses and phone numbers of contact persons served as a consultation resource. A communications network for ODS mental health issues already existed in the form of electronic mail groups dedicated to PTSD issues and established regularly scheduled MH&BSS and Readjustment Counseling Service hotline teleconferences.

Since the War's End
    Public Law 102-25 provided funds for VA medical center and VA Center programs specifically to serve Gulf War veterans. Eligibility for VA Center services previously reserved for Vietnam-era veterans has been expanded to include veterans of all post-Vietnam conflicts: Lebanon, Grenada, Panama, and the Persian Gulf War. Funds for additional staffing were also provided to the VA Centers.

Public Law 102-25 funds have been used to establish over 20 VA medical center projects with the specific task of screening troops activated and/or deployed for the Gulf War. Several facilities have made contact with state National Guard or Reserve leadership to facilitate this activity. Reservists and Guard members activated for the war are eligible for VA services. Collaboration with DoD has continued through combined screening projects (e.g.,

Fort Devens, MA) and a satellite teleconference jointly presented by VA and DoD on Re-entry Issues of returning troops. VA clinical services to the survivors of the SCUD attack on the 14th Quartermaster Unit in Dhahran have been supported by P.L. 102-25 resources.

The purpose of VA contacts with Gulf War veterans is to offer screening for psychological, medical, or social-economic problems and to provide appropriate remedial services or referrals. A "debriefing" approach and a conception of stress related disorders as normative responses to extraordinary pressures are the basic orientations of these activities. It is our intention to avoid "overdiagnosis" of PTSD and other disorders while accurately identifying existing problems and correcting them before they harden into chronicity. Baseline data is being gathered for the future using standardized assessment instruments that can be found in the ODS Clinician Packet. It is hoped that by tracking over time, the impact of battle fatigue management and debriefing techniques on the control of war zone related stress can be evaluated.

Public Law 102-27 requires both VA and DoD to submit reports on stress disorders in Gulf War returnees. The first of the reports was submitted in July, 1991; the second is due in April, 1992. VA and DoD each submits a separate report but there is also a brief, joint report. VA's report, War Zone Stress Among Returning Persian Gulf Troops: A Preliminary Report, was written by a team, most of whom were members of the Mental Health ODS Field Working Group. The goal of the report was to assess the nature and extent of stress disorders, including PTSD in troops activated and/or deployed in the Gulf War and to assess their health care needs.

Only preliminary results are currently available. There seems to be relatively little PTSD as diagnosed by DSM-III-R, which might be expected given the brief and successful nature of the war. Of the first 328 Gulf veterans seen at VA Centers, only 10 had PTSD and these were Vietnam veterans retraumatized by deployment to the Gulf. Among the first 59 returnees seen at Fort Devens, most had limited exposure to combat stressors and only 3% scored in the PTSD range on a standardized questionnaire. Of troops screened at Fort Benning, Georgia, who had more frequent exposure to combat stress, 10-20% scored in the PTSD range on a standard instrument. Of the 20 survivors of the SCUD attack at Dhahran who went through a one month treatment program provided by VAMC Pittsburgh, five scored in the PTSD range at the beginning of the program; but only one individual was felt to still be suffering from PTSD at the end of treatment. Initial screening also has identified positive aspects to the Gulf War experience. Over 80% of the Fort Devens sample reported that they felt well prepared and had performed well in their jobs during the war; over 80% also felt that their service in the Gulf would make their lives better.

CONCLUSION

It bears repeating that all the attention given to stress disorders related to the Gulf War is the result of the suffering of Vietnam veterans whose PTSD went so long unrecognized. The educational programs and materials developed for the war will find use, not only for helping war related stress, but also for the victims of civilian catastrophes. Early screening and identification of stress related problems in troops activated for the Gulf War will, hopefully, enable us to correct existing psychiatric and social-economic problems before they become chronic.

REFERENCES

Riney, S., Abueg, F., & Gusman, F. (Eds.) (1991). _Operation Desert Storm clinical packet_. Palo Alto, CA: VA National Center for PTSD, Clinical Laboratory & Education Division, VAMC Palo Alto (Menlo Park Division).

VA Persian Gulf Returnees Working Group (Robert Rosenheck, Chairman). (1991). _War zone stress among returning Persian Gulf troops: A preliminary report_. West Haven, CT: VA National Center for PTSD, Evaluation Division, VAMC West Haven, p. 129.

A limited number of these publications are available from the National Center for PTSD Divisions that developed them.

PRELIMINARY REPORT OF A REUNION SURVEY ON DESERT STORM RETURNEES

Jessica Wolfe, Ph.D. & Chaplain (LTC) William Mark
National Center for PTSD, Department of Veterans Affairs
Boston, Massachusetts

This report presents preliminary data from a large reunion survey of Desert Storm personnel conducted by the Chaplaincy at Fort Devens, Massachusetts from mid-April to mid-June, 1991. The data reflect preliminary analyses of over 2,500 individuals who completed this survey within 5 days of their return to Fort Devens. This phase of the survey was composed of a self-report questionnaire involving a series of questions and psychometric instruments. Several of the instruments constitute validated measures of psychological distress and/or PTSD and are in widespread use in the mental health field. Other survey measures were designed to assess: (a) relevant background characteristics and (b) distinctive deployment-related experiences and their relationship to subsequent patterns of readjustment. Because of the nature of the Persian Gulf conflict, an emphasis was placed on identification of nontraditional (i.e., noncombat) deployment experiences, in particular, domestic stressors.

VETERAN AND SERVICE CHARACTERISTICS

Most veterans in this particular sample were Caucasian males with at least a high school education. While the vast majority of the sample are males, a number of minority groups including women, Blacks, Hispanics, Asians, and native Americans were also represented. Analyses of background variables showed that males were far more likely than females to be married at the time of deployment (52% vs. 24%). Over half the women were single during the time of service. The majority of the sample was comprised of National Guard members (53%), with some Reserve (21%) and active duty participants (26%). Women in this sample appear to have a substantially lower rank than males: More than half are below the rank of E-5 compared to approximately one-third of the men. Months of deployment in the Gulf were relatively brief for all personnel, averaging nearly 4 months.

STRESSOR EXPOSURE

Stressor exposure was characterized initially along two dimensions: combat/war zone (deployment) and domestic. Out of 33 potential war zone stressors, soldiers endorsed having encountered 25 (76%) at least one or more times. Being on alert for possible SCUD attack was the most commonly endorsed war zone stressor, reported by a majority of the sample. Nearly three-quarters of the soldiers reported being under actual attack at some point. Using a 5-level (0-4) combat exposure scale developed for use with Vietnam veterans (Gallops, Laufer, & Yager, 1981), the majority of the total sample scored in the low combat exposure range. However, there were differences across service classifications, with certain active duty and Guard personnel reporting markedly higher levels. Thus, a considerable range of experience within traditional combat distinctions was identified even though this scale was not originally designed to reflect the particular experiences of Desert Storm personnel.

In comparing rates of the prominence (i.e., severity/gravity) of deployment vs. domestic stressors, there was little difference by gender: Nearly 76% of males reported deployment stressors as their most serious wartime stress while 79% of all female personnel endorsed this category Within the combat/deployment stressor classification, SCUD attack followed by SCUD alert were the most frequently endorsed stressor events for men. Women, in comparison, described SCUD attacks and, secondarily, death or injury of a unit member as contributing most to their deployment stress. In terms of domestic stressors, men reported separation from family as the most distressing occurrence in that realm, followed by illness or trauma sustained by a relative at home. In contrast, women noted family separation as the most problematic domestic event with death of a family member listed as the second most significant source of stress. The presence of these stressors within and across units, as well as their association with varying types of psychological distress, require further, detailed investigation.

STRESS SYMPTOMS

Stress symptoms were assessed along two dimensions: general psychological distress and symptoms suggestive of post-traumatic stress. Symptoms were measured by use of two empirically validated scales--the Brief Symptom Inventory (BSI; Derogatis, 1983) and the Mississippi Scale for Combat-related PTSD (Keane, Caddell, & Taylor, 1988). In addition, several symptom indices were obtained through a checklist format. Overall, mean scores for both PTSD-related and general psychological distress were below cutoff levels for clinical significance for all groups on average. However, when group ranges were examined, it was found that approximately 7% of all deployed men and 14% of all deployed women in this sample reported symptoms associated with PTSD at a clinically significant level. This pattern was elevated when looking at self-reports of general psychological distress: Here, approximately 22% of men and 23% of women in this sample indicated having psychological symptoms in a clinically significant range, suggesting the prominence of generic forms of distress at the time of this survey. The association of stressor exposure to these symptom patterns, and the relationship of these patterns to any longer-term adjustment difficulties, warrant additional exploration.

CONCLUSION

While the overall rate of traditional combat exposure is relatively low in this sample, respondents indicated a wide range of nontraditional stressors including anticipation of lethal attack and a series of other war zone events. In addition, there was considerable emphasis on the effects of domestic stresses. Consistent with exposure measures, psychological and stress-related symptoms were at a relatively low level. Nonetheless, a notable portion of the total sample reported a variety of symptoms on early return, even in conjunction with expectations of the positive effects of wartime service. The significance, course, and extent of these patterns can best be determined by following this sample over a longer period of time, particularly after soldiers have returned to predeployment vocational and family settings.

U.S. NAVY MEDICAL RESERVIST SURVEY:
PERCEPTIONS, ATTITUDES, AND TURNOVER INTENT

D. Stephen Nice, Ph.D.
Naval Health Research Center
San Diego, California

Subsequent to the recall of 9,700 Navy medical reservists for Operation Desert Shield/Storm, the Navy Surgeon General requested an evaluation of the recall process and its potential impact on turnover in the medical reserves. In June, 1991, an 82-item survey was distributed, and 3,804 medical reservists (39%) responded by September. Data indicated that reservists were reasonably well satisfied with their recall experience, but identified a number of important issues for improvement. Only about 16% of the respondents indicated intent to leave the reserves. The data were used by a task force to develop Navy policy initiatives.

Approximately 2 weeks after the Iraqi invasion of Kuwait, the Secretary of Defense requested that the military services develop a plan for the call-up of reserve forces in support of Operation Desert Shield. The recall was authorized by the President on August 22, 1990, and set in motion a process which would activate approximately 9,700 U.S. Navy medical reservists over the succeeding 4 months. Recognizing this opportunity to evaluate the total force concept, the Surgeon General of the Navy requested the Naval Health Research Center to evaluate the recall process and its potential impact on turnover in the medical reserves.

June 1991, an 82-item survey was distributed to all U.S. Navy medical reservists who were recalled during operations Desert Shield/Storm (N=9,747). This survey was constructed to assess demographic information, in-processing, out-processing, recall assignment, turnover intentions, and attitudes and perceptions regarding recall issues. In order to provide objective assessments of selected issues as well as broad coverage of attitudes and perceptions, both quantitative information, using Likert-type rating scales, and qualitative input, using semi-structured narrative responses, was collected.

A total of 3,804 medical reservists (39%) responded to the survey between June and September, 1991. The demographic composition of the sample was very similar to the population and included Hospital Corpsmen (56%), Nurse Corps (24%), Medical Corps (12%), and Medical Service Corps (6%). The sample was primarily white (84%), and approximately evenly divided between men (54%) and women (46%). The mean age of the sample was 35 (range=18-65). More than half of the men (70%) and women (59%) were married, and about one-half of all respondents had children living at home. Approximately 10% of the women and 3.% of the men in the sample were single parents and about 25% of the spouses were either active duty military or reservists.

While many reservists were deployed to the Persian Gulf area, most (71%) served in the continental United States (CONUS), typically "backfilling" hospital or clinic jobs vacated by active duty personnel who were deployed. For those reservists assigned in CONUS, the median distance between home and recall assignment was 225 miles, and about one-third remained within commuting distance (50 miles) of their home.

A set of 34 items developed by subject matter experts at the Bureau of Medicine and Surgery was presented in a 5-point Likert-type format to provide a quantitative assessment of attitudes and perceptions regarding the recall experience. In order to improve the identification and interpretability of issues and facilitate statistical analyses, factor analytic procedures were used to derive a set of underlying dimensions. Factor loadings of .40 or greater were used to develop factors, and a varimax rotation was employed. This principal components analysis yielded a nine-factor solution, and the following descriptive labels were assigned on the basis of item content: (1) satisfaction with in/out processing, (2) preparation in the reserves, (3) assignment satisfaction, (4) preparedness, (5) command staffing and equipment, (6) habitability and administration, (7) community and family support, (8) financial and family hardship, and (9) school attendance and dependent care hardship. The items in these factors were then entered into a scaling analysis to determine their internal consistency and reliability. The reliability of the school attendance and dependent care scale was not sufficient (coefficient alpha=.45), and this 2-item scale was removed from subsequent analyses. The remaining reliabilities (coefficient alpha) ranged from .69 to .89.

The overall mean levels of satisfaction on each of the 5-point scales were preparedness (4.33), community and family support (3.82), satisfaction with in/out processing (3.77), assignment satisfaction (3-61), habitability (3.44), command staffing and equipment (3.43), financial and family hardship (3.36), and preparation in the reserves (3.22). A between-group analysis of variance was computed to assess the relationship between assignment (Persian Gulf versus CONUS) and occupation (Medical Corps, Nurse Corps, Medical Service Corps, Hospital Corps) on each of the eight satisfaction scales. Generally speaking, personnel assigned to CONUS facilities were more satisfied with their level of preparedness, their assignment, the command staffing and equipment, and habitability and administration, and experienced less financial/family hardship than their peers who were assigned to the Persian Gulf area. Personnel assigned to the Persian Gulf, however, perceived a greater level of community and family support. The main effect of occupation was significant across all scales and the general finding was that the Hospital Corpsmen were least satisfied and Medical Service Corps officers were most satisfied. Medical officers, however, reported the greatest levels of financial/family hardship.

Only about 16% of the reservists in this sample intend to resign from the reserves or transfer to the individual ready reserves. The primary reasons provided for intent to leave the reserves were civilian life issues (34%), pay issues (5%), recall management (18%), duty station issues (29%), and general military issues (14%). A content analysis of the narrative responses to the survey indicated that the most positive aspects of the recall were camaraderie (46%), skills enhancement (31%), self-growth (18%), expression of patriotism (16%), military lifestyle (16%), and job contribution (15%). The most negative aspects of the recall were family separation (17%), relationship with active duty personnel (17%), leadership (17%), disbursing/processing of payment (16%), bias (14%), living conditions (12%), and poor job fit (11%). Given the opportunity for multiple responses per item, the percentages sum to more than 100.

These data indicate that reservists were reasonably well satisfied with their recall assignment and felt prepared to perform their duties; however, a number of important issues were identified for improvement. Detailed

information from this survey was presented to the Surgeon General and a task force which was assembled to make policy recommendations regarding the medical reservist community and the recall process. Additional efforts are underway to assess the impact of Operations Desert Shield/Storm on the active-duty Navy medical community.

COMBAT PSYCHIATRY: LESSONS FROM THE WAR IN SOUTHWEST ASIA

James A. Martin, Ph.D.
U.S. Army Medical Research Unit - Europe
Heidelberg, Germany

This article examines combat psychiatric support during the United States Army's deployment in Southwest Asia (SWA). The focus is corps and division level mental health support.

Overall, corps and division mental health personnel and units were not prepared to perform their combat mission. As individuals and as units, they were not ready for a "come as you are war." Fortunately, there was time available in the SWA Theater for mental health personnel and units to get organized, equipped, and oriented for combat. The Army was fortunate that these "last minute" preparations were not severely tested.

The extremely successful 100 hour ground assault, with rapid advances on all fronts and very few physical casualties, had the expected result of almost no American combat stress casualties. If Saddam Hussein had been able to deliver on his chemical and biological warfare threats, and if the Army had experienced significant numbers of physical casualties in a series of drawn-out battles across Iraq, corresponding numbers of battle fatigue casualties would have occurred. One combat stress casualty for every three physical casualties would have been the norm, with higher ratios in mass casualty situations. The total number of combat stress casualties could have easily overwhelmed the division and corps-level mental health resources in SWA.

Even a very successful war produces "pockets of trauma." There are small numbers of soldiers who experience, firsthand, the horrors of combat. These soldiers may witness the violent deaths of enemy soldiers and the severe injury and/or the deaths of members of their own unit. They may encounter the terror of friendly fire. Or they may be involved in providing comfort to the innocent victims of war; those women, children, and elderly civilian refugees who seek food, water and medical help from front-line soldiers. Like all victims of trauma, many of these exposed soldiers will experience some of the normal symptoms of extreme stress, intrusive thoughts, difficulty sleeping, etc. These soldiers need an opportunity to talk about their experiences with fellow soldiers, unit leaders, and sometimes with professional helpers like chaplains and mental health personnel. Despite efforts by senior mental health personnel to encourage these types of debriefings, they only occurred in a few locations. Prior to the start of the ground war, there was no systematic theater plan for conducting critical incident stress debriefings. When a plan was finally developed, it was too late to implement it. In addition, many of the mental health personnel in the theater did not have training and/or experience with this type of clinical intervention.

The author's assessments of corps and division mental health units are based on data collected in SWA during Desert Shield (as a member of a HQDA stress assessment team) and Desert Storm (as a social scientist studying mental health operations and later as a mental health clinician in a forward deployed combat unit). Information also came from reviews of unit after-action reports, as well as extensive interviews with mental health and other medical and non-medical personnel who served in SWA.

While critical of the overall mental health effort, the author does not intend a personal criticism of any individual. There were notable individual achievements by mental health personnel and, in general, people did the best they could. Unfortunately, despite a repeated history of failing to prepare for combat stress casualties, the Army was not adequately prepared for what might have happened in SWA.

Corps-Level Psychiatric Medical Detachments (OM Teams)

The primary mental health unit supporting a corps is a psychiatric medical detachment--better known by its Army nomenclature as an OM team. The OM team concept is obsolete and is scheduled to be replaced by a new organization (Combat Stress Control Company) better designed and equipped for modern combat. Unfortunately, the fielding of these new units has been a lengthy process, and they were not available for deployment to SWA.

The Army deployed three OM teams (one from the active Army and the other two from the Reserves) to support the SWA Theater; one to each corps and a third, initially deployed at Theater-level, but subsequently broken up with elements attached to the two existing corps OM teams. Each OM team consisted of approximately 50 individuals, including psychiatrists, social workers, psychologists, psychiatric nurses, enlisted behavioral science specialists, and inpatient psychiatric specialists, as well as a few soldiers with administrative and logistical skills (and corresponding vehicles and equipment needed to support the OM team's activities). OM teams are designed to operate a small holding section (approximately 25 cots) and to provide consultation and treatment sections in support of division mental health teams.

Whether from the active or reserve component, OM teams need to be staffed, equipped, and trained so that they can perform their designated combat functions. (Obviously, the same will be true of the new combat stress control companies). At a minimum, they should have a sufficient core of well trained key personnel so they can be quickly filled and rapidly mobilized for combat. None of the OM teams deployed to SWA met this standard. Some of their deficiencies included:

1. The active duty team commander, a professional officer filler system (PROFIS) medical officer, was not allowed to deploy and a new commander was not designated until 10 days after the team members began arriving at the mobilization station.

2. The active duty team members (all PROFIS) had never trained together. Most team members were not trained (as mental health professionals or soldiers) for this type of mission.

3. Some social workers on the OM teams lacked training and/or skill in rapid diagnostic assessment and brief treatment. These are critical skills required to support the OM team's preferred operational method of dispersing in support of division mental health teams and assisting in forward treatment of acute stress. This deficiency limited team effectiveness and resulted in other unit professionals having to "reevaluate" patients already seen by these social work officers.

4. Unit readiness reports for one reserve OM team did not reflect the team's actual personnel, equipment, or training status. These reports were grossly inflated. The commander was not professionally qualified for his

position (he was not a mental health officer) and was replaced before the unit deployed. The subsequent commander came from another region of the U.S., had no prior contact with the unit, had to attend an officer basic orientation class before deploying, and did not join the team until after it arrived in SWA. At mobilization, 21 team members were nondeployable and replacements had to be found. When the team deployed to SWA, it was still short three of its required psychiatrists and one psychologist.

5. Despite a high readiness status, at least one of the reserve OM teams had an entire component of professional and enlisted members who had never trained together. Like the active duty team, the reserve teams also had professional members who lacked rapid assessment and brief treatment skills and almost everyone (officer and enlisted) on the reserve OM team lacked adequate soldier (field) skills. As the ground war approached, not having these skills was a psychological barrier which delayed the dispersion of some of the reserve OM team treatment sections from their relatively safe and comfortable location (co-located with an evacuation hospital) to forward positions supporting the division mental health teams.

6. Armored Cavalry Regiments (ACRs) and separate brigades do not have organic mental health resources. These units received numerous attachments before the start of the ground war (active and reserve component combat, combat support, and service support soldiers) so that the ACRs (and some of the other separate combat brigades) were the size of peacetime divisions. Unfortunately, only one of these units received its own mental health team before the start of the ground war.

Division Mental Health Teams
    Division mental health teams are composed of three mental health officers (a psychiatrist, social worker, and clinical psychologist) and four to six behavioral science specialists. Their primary peacetime tasks include unit-level command consultation concerning a range of military related mental health issues, and unit-level training for the prevention and treatment of battle fatigue. With a few exceptions, most division mental health officers spend the majority of their time at the local installation hospital or military community mental health clinic providing traditional out-patient clinical services to individual soldiers and their family members. Combat related mental health issues often receive a low priority and very few division mental health teams ever deploy to major training exercises or go on peacetime contingency missions.

    Most division mental health professionals are company grade officers (lieutenants and captains) with limited military experience and training. Their lack of rank, skill, and experience make it difficult for them to establish credible command consultation programs. At least one of the officers on each division mental health team needs to be a senior mental health professional and an experienced soldier.

    Seven division mental health teams were deployed to SWA, four in XVIII Corps and three in VII Corps. As mentioned earlier, the separate brigades and Armored Cavalry Regiments (ACRs) did not deploy with mental health personnel.

Like OM teams, each division mental health team had its own unique experience. This article highlights some of the SWA lessons learned.

1. A number of teams were not adequately staffed when their division's deployment was announced. Critical positions were filled just before the deployment with no opportunity to train or operate as a team before departure for SWA. The HQDA and MEDCOM mental health consultants were not always provided an opportunity to select (or even recommend) the best persons for these vacant positions. Mental health personnel were selected by rigid cross-leveling rules to fill vacancies. Some of these individuals, personally and/or professionally, were not qualified for the roles they were assigned and a few of these individuals became obvious liabilities to their teams.

2. Some division mental health teams did not have tactical vehicles until just before the start of the ground offensive (and one team never obtained adequate transportation at all). Without adequate transportation, it was impossible to provide battle fatigue training, mental health consultation, or treatment and follow-up services for divisional units spread over a large desert area. Even when they had access to vehicles, division mental health personnel often lacked field training and were comfortable simply "waiting" for patients to be brought to them.

3. Two division mental health teams were models of effective operations. In each case, success was rooted in their home station preparations. These teams had a history of "going to the field," and the thrust of their garrison mental health activities was focused on creating a system of care applicable in combat. For example, at home station these teams had close working relationships with division chaplain unit ministry teams. In each case, at least one mental health officer on the team had established division-wide credibility. The officer had been able to instill the importance of mental health issues (including battle fatigue training) in the minds of senior members of the division, typically battalion and brigade commanders, as well as key members of the division commander's headquarters staff. Teams without this preparation fell short in their efforts to build and operate credible command consultation programs in the desert.

4. In conflicts that proceed as successfully as Desert Storm (or "Just Cause" in Panama), there are very few battle fatigue casualties. While there may be very little for the division mental health team to do during battle, it is the period after combat when the team can perform one of its most important functions, namely, supporting critical incident stress debriefings for those units and individual soldiers exposed to combat trauma. Only a few division mental health teams actually sought out these trauma victims and provided small-unit critical incident stress debriefings. In addition, very few mental health officers and almost no enlisted behavioral science specialists have the specific training required to conduct post-combat debriefings.

5. For some divisions the "follow-on" phase of the war in SWA involved moving back into Iraq and providing support and care to civilian refugees. This was a very stressful experience. This period provided another opportunity for division mental health teams to offer consultation and support, especially to medical personnel who often experienced the physical and emotional brunt of providing this humanitarian service. While a few division mental health teams were active during this phase, none had trained for this unexpected and difficult post-combat role.

6. A final role for the division mental health team (in cooperation with division chaplains) was preparation of soldiers for movement home and the associated family or "reunion" stress. Some teams were active in this role but few had actually prepared for this task as part of their home station readiness training.

CONCLUSION

Corps and division mental health teams (and the evacuation hospitals) did not have to cope with large numbers of battle fatigue casualties in SWA. If significant casualties had occurred, these teams would have found it very difficult to carry out their mission. They were not adequately staffed, equipped, or trained in peacetime to perform their wartime role. The world is a dangerous place and the Army must be prepared today for tomorrow's conflict. As highlighted here, lessons learned in SWA provide a reference point from which to prepare for this inevitability.

FORCE SUSTAINMENT IN DESERT SHIELD/DESERT STORM

Richard L. Price, Ph.D.
23rd Medical Group/SGHZMM
England AFB, Louisiana

From September 24, 1990, to March 27, 1991, MAJ Charles Colosimo, TSgt Michael Trant, A1C Toby Clark, and I operated a stress management center as a satellite of a 50-bed air transportable hospital. Our hospital, dormitory, and cafeteria were located within a fenced compound adjacent to an international airport several miles outside a major city in Saudi Arabia. We were deployed in support of a 1700 person USAF KC-135 tanker wing, a 500 person USA Patriot battalion, an 800 person USA transportation battalion, and approximately 275 personnel assigned to the hospital, aeromedical staging facilities, and aeromedical evacuation unit. In this paper, I'll summarize some of the highlights concerning our mission, the problems we faced, our concept of operations, the work we did, and the lessons we learned.

MISSION

Initially, we had no clear-cut tasking other than to set up the hospital, train for chemical warfare and mass casualty (expectant team) contingencies, and take mental health referrals as they made themselves known, either through the hospital, unit, or individual. However, through coordination with other mental health professionals in the theater, we developed the following mission statement: "to help commanders keep their personnel functioning effectively in support of the military mission, thereby precluding evacuation to the rear whenever possible."

PROBLEMS

One of the two major problems we encountered in trying to perform our mission was that prior planning had made no provision for mental health facilities, supplies, or equipment. We began to deal with this problem by asking the nursing staff to let us use a small portion of one vacant ward. However, this working area was very small and did not afford privacy. In addition, we knew it was only temporary, depending on whether or not the ward space might be needed for physically ill or injured patients. After one month, the base commander agreed to let us use a 32 foot section of temper tent located in the tent city 50 yards from the hospital. Our tent was equipped with lighting, an environmental control unit, chairs, three tables, and two lockable cabinets--all obtained by creative borrowing. We eventually received a telephone as well, which helped tremendously in our communication with commanders and the hospital. The fact that our tent was adjacent to two other 32 foot tents designated for our contingency use made this a good location for the center.

A second and equally difficult problem was that hospital personnel seemed to have had no prior education or guidance that would prepare them to see preventive mental health service as being able to play a significant role in helping military commanders accomplish their mission. We addressed this second problem by working through the chief of hospital services to establish a separate mental health disaster response team and develop a concept of operations for treating combat stress casualties if they should be sent to our

location. To support our point of view, we did in-service training for physicians and nursing staff pertaining to battlefield fatigue and the treatment of psychiatric casualties. We also met with commanders, first sergeants, and supervisors to discuss the services we could offer. As a result, we were invited to visit numerous Air Force, Army, and Marine units to conduct stress, relaxation, combat fatigue, and high risk management classes. We also held a command-wide mental health conference and started a weekly local mental health forum (US, UK, France) to share ideas and develop guidelines for working together to provide the best services possible in the deployed setting. Through all these efforts, the hospital leadership cadre gradually began to see the stress management center as an important resource for the base as well as the hospital.

CONCEPT OF OPERATIONS

As a base resource, our stress management center operated essentially in keeping with the guidelines developed by the command-wide mental health conference. Several of the specific steps suggested by the conference and used by our team were as follows:

(a) Establish and maintain good working relationships with commanders, key supervisors, first sergeants, chaplains, morale personnel, and services personnel.

(b) Publicize the center as a base-wide asset with emphasis on drop-in counseling and educational services (e.g., stress management, relaxation, assertiveness, anger control, self hypnosis, smoking cessation, etc.).

(c) Seek opportunities to make "How goes it" visits or stress management talks to individual units.

(d) Provide on-site consultations and follow-up with commanders, supervisors, and individuals as needed.

(e) Provide educational inputs via the base newsletter addressing coping skills, supervisory tips, and other preventive mental health topics.

(f) Encourage commanders to hold meetings in order to share information, answer questions, control rumors, and reinforce guidance.

(g) Let commanders know of team availability to participate in staff meetings as consultants, either regularly or to address specific topics.

(h) Offer suicide prevention, holiday management, panic control, and conflict resolution sessions as needed to help commanders manage potentially mission-threatening situations.

(i) Emphasize short-term, problem-oriented counseling maximizing unit bonding and avoiding "sick role" identification. Consider brief trials of anti-anxiety or sleep medication in conjunction with medical evaluation. Avoid antidepressant medication which might exacerbate heat storage problems for individuals required to wear MOPP gear.

(j) Use mental health technicians as force multipliers by involving them in the following activities: skill training, intake interviews, supportive counseling, teaching relaxation and stress management, assisting with site visits, identifying and training augmentees for mental health disaster response and combat stress teams, and teaching self-aid and buddy care classes as they pertain to combat stress management.

143

Some of the operational concepts developed in the conference pertaining to the contingency response phase of the deployment were as follows:

(a) Providers need to define their mission in relation to other hospital patient care activities. This will involve obtaining commitments to having dedicated staff for a separate combat stress response team; to identify and train augmentees for the combat stress team; to coordinate medical screening procedures with the minimal care team; and to make arrangements for equipment, supplies, housing, patient accountability, etc.

(b) Providers should agree beforehand with hospital leadership on a limit to the number of combat stress recovery personnel they can manage, given their facilities and manpower.

(c) Providers may plan to triage combat stress casualties to assist with patient flow and provider effectiveness. More stable patients can be asked to help with others in some cases.

(d) Providers should plan and coordinate procedures for short-term treatment of severely disturbed patients.

THE WORK

Once we had a place to see people and made our services known, we began to see a steady flow of clients/patients that continued through mid-March 1991. In all, we presented 103 briefings, classes, or in-service training sessions and provided 1139 individual counseling sessions—257 of which were conducted by a technician with credentialed provider backup. Two thirds of our work was done on a drop-in basis with no documentation other than counting the visit. Informal counseling of this type resulted in a much higher utilization of our services than would have been the case otherwise.

However, for 73 of the people who used our services, we did maintain more or less formal case documentation—usually for those cases referred by commanders or supervisors or which seemed more severe. These 73 individuals accounted for 376 of the 1139 visits noted above. Descriptive data concerning these individuals is as follows:

(a) Age:

18-21 years	11
22-25 years	22
26-29 years	14
30-35 years	10
36 years and older	14
age unknown	2

(b) Sex:

males	50
females	23

(c) Service:

US Air Force	46
US Army	24
unknown	3

(d) Referral source:

self	40
commander or supervisor	19
physician	12
chaplain	2

(e) Symptoms:
        physical problem   22
        depression   20
        work problem   19
        close relationship problem   14
        sleep problem   13
        anger control problem   12
        anxiety   9
        threat of harm to self or others   8
        family concerns   7
        family separation   6
        desire to stop smoking   3
        alcohol-related concerns   2
        violent behavior   2
        irrational behavior   1
(f) Intervention:
        testing   15
        sleep medication   4
        minor tranquilizer   1
        major tranquilizer   0
        tricyclic used for headache or anxiety   2
        tricyclic used for depression   0
        brief hospitalization   6
        1-2 visits   30
        3-5 visits   20
        6 or more visits   24
        referrals to a class or group   6
(g) Diagnoses:
        adjustment disorder   32
        anxiety-related disorder   5
        bipolar disorder (manic)   1
        major depression   1
        other Axis I disorder   10
        life circumstance problem   19
        occupational problem   16
        marital or interpersonal relationship problem   9
        Axis II disorder   8
        Axis II features   7
        Axis III disorder   22
(h) Disposition:
        returned to duty   45
        dropped out of treatment   20
        coordinated aeromedical evacuation   5
        recommended for administrative separation   3

        The five individuals who were evacuated from the theater were as follows--
one bipolar disorder/manic; one suicidal/homicidal homosexual; two seriously
depressed and suicidal patients; and one chronic low back pain patient with
psychosomatic features.

        In addition to the 1139 patient visits conducted in the stress management
center, our staff made frequent informal consultations outside the center with
chaplains, medical personnel, commanders, first sergeants, supervisors, and
individuals. Although we did not keep a record of these consultations, they

played an essential role in maintaining rapport and keeping lines of communication open to enable us to be effective.

In general, our efforts were geared toward keeping people in theater unless they were candidates for a medical evaluation board or posed a threat to themselves or others. As one might guess, there were many difficult judgment calls. As a rule of thumb, if a person was medically fit but not adjusting well, we tended to reccmmend the commander consider administrative separation or disciplinary action if the individual was not willing to work to adapt. Most of those willing to give it their best effort were responsive to brief supportive counseling mixed with a heavy dose of rational emotive therapy.

One difficult situation that often arose involved a spouse at home who was unstable and/or extremely manipulative in trying to get the member back home. Often the spouse refused to go to the mental health clinic or to other medical professionals to access the Red Cross emergency notification system. This left the member feeling helpless and frustrated. The commander or first sergeant was often found trying in vain to coordinate with the unit back home in an effort to get the spouse to take advantage of mental health, chapel, family support, squadron, or other community resources. We tried to convince the member the family separation was an opportunity for mutual growth in independence and confidence. However, that point of view was sometimes difficult to get across--particularly when the member was also manipulative or unstable. Consequently, we were left guessing how long we could continue to advise the commander to insist the member do his or her job despite threats of suicide, divorce, financial disaster, or child abuse by the spouse. For one thing, we did not want to become known as a ticket out of the theater. Had we done so, we might well have been overrun in short order, compromising our ability to function effectively and ultimately causing mission readiness to suffer. However, we also felt that in most cases it would be in the best interest of the member to remain with his or her unit rather than face guilt and/or ostracism in the future about leaving the theater. Obviously, this situation was more complicated in the case of personnel who were new augmentees or for some other reason had not bonded with their units.

Most of our work dealt with separation, relationship, environment, and job problems. We did have some persons who overtly presented with anxiety or panic concerning the war and we often heard concerns about chemical warfare, missiles, or terrorists. However, the absence of a rotation date, feelings of uselessness, long hours, absence of diversions, mail and phone difficulties, and the restrictive local culture were much more frequent complaints.

LESSONS LEARNED

With this deployment, we had an opportunity to rehearse our readiness skills with as much realism as possible short of actually treating mass combat casualties. Several observations may prove helpful in preparing for future contingencies. First, proactive mental health care is a force multiplier that can enhance mission readiness by helping commanders and supervisors address unit problems and keep the maximum number of personnel functioning effectively in their units. Second, Department of Defense and service-level working groups should identify mental health needs in a deployed setting, develop guidelines for care delivery, and establish supply and equipment requirements. Third, disaster response planning should provide for a separate mental health response team, whether the disaster is combat-related or not. Mental health casualties

can be triaged into four categories: physically injured with emotional trauma;
those requiring psychiatric hospitalization; those who can be treated briefly
and followed as outpatients; and those who can best be treated in a combat
stress recovery unit. Response planning should take these categories into
account and also consider the need for medical screening prior to referral to
the mental health team. Finally, a mental health representative can be a
helpful member in hospital staff meetings, not only to assist with planning and
problem solving, but also to develop programs to meet the hospital's own needs
for preventive mental health care.

A COMMUNITY RESPONSE TO MILITARY MOBILIZATION

L. Scott Fairchild, Psy.D.
Psychology Service
Walter Reed Army Medical Center
Washington, DC

Robert R. Roland, Psy.D.
Command Psychologist
U.S. Army Special Operations Command
Fort Bragg, North Carolina

Operations Desert Shield/Storm heavily taxed the existing mental health resources and support systems in the Fort Bragg and Fayetteville, North Carolina community. Research has demonstrated the utility of employing proactive psychological response teams during such times of crises. Recognizing the gap between the needs of the community and available resources, the Community Mental Health Service coordinated resources for the most effective delivery of care to soldiers, families and the local community. The authors trace the origin, development and implementation of Fort Bragg's comprehensive Human Response to Operations Desert Shield/Storm program. The concept of a multi-disciplinary "family support team" is proposed as an effective means of meeting total community mental health needs during military mobilization. The authors present this multi-disciplinary model for other providers who may be challenged in similar stress producing environments.

In June of 1990, the cover of U.S. News and World Report reads "Saddam Hussein: The Most Dangerous Man in the World." On the 2nd of August 1990, more than 200,000 Iraqi soldiers, heavily supported by tanks and helicopters, roared over the southern border of Iraq and seized the tiny country of Kuwait.

Several days later the Iraqi army positioned its forces along the southern Kuwaiti border poised for a potential invasion of Saudi Arabia, another oil magnate. Expressing concern that the Saudi oil fields could be the next adventure on Saddam Hussein's agenda, President George Bush offered assistance to King Fahd, the Saudi ruler.

The King accepted the offer and on the 9th of August, the 82nd Airborne Division from Fort Bragg, North Carolina, was deployed to the deserts of Northern Saudi Arabia in an attempt to deter the unprovoked aggression. Shortly thereafter they were joined by units of the 101st Airborne Division (Air Assault) from Fort Campbell, Kentucky. With two lightly equipped Army Divisions moving rapidly into the Persian gulf region, Army General H. Norman Schwarzkopf and the Central Command were given the mission to implement a plan to defend Saudi Arabia. As the plan unfolded, it became known as Operation Desert Shield. There were concerns that the two highly mobile light divisions would be ill-equipped to defend against the well armed Iraqi mechanized Armor forces. The decision was made to send American mechanized and armored units to the developing theater of operations. Several days later the 24th Infantry Division (Mechanized) and the 197th Infantry Brigade (Mechanized) deployed from the United States to the Persian Gulf via Sealift. They were soon joined by the 1st Cavalry Division and one brigade of the 2nd Armor Division from Fort Hood, Texas. Soon levels approached that needed for offensive operations.

With the deployment of such a large number of XVIIIth Airborne Corps assets, consideration was given to increasing needs of the families of the deployed soldiers. Numerous references (Braza & Braza, 1991; Williams, 1987) demonstrated that early interventions are critical in reducing the long term impact of exposure to traumatic events.

Previous Exposure

The report of the Gander, Newfoundland, disaster, where 248 soldiers were lost in an aircraft accident on their return from duty in the Sinai, showed that leadership emerges as the key variable ameliorating stress in such an unprecedented massive single unexpected community stressor (Walter Reed Army Institute of Research, 1987).

During the Viet Nam war, most soldiers were deployed and returned individually. Although the devastating effect is not denied, a more "circumscribed" impact was experienced. In Viet Nam, exposure to conflict and the intensity was drawn out over a long period of time.

Units and elements of the XVIIIth Airborne Corps are relatively accustomed to short notice, world-wide deployments with the potential for intense conflict upon arrival. The establishment of the family support group network at Fort Bragg parallels the nature of the missions of these units. While soldiers experienced high intensity, short duration conflict during the U.S. invasion of Panama (Operation Just Cause), family support group networks at Fort Bragg and at other XVIIIth Airborne Corps units rapidly mobilized to provide support to soldiers and the community.

Operation Just Cause brought with it a high intensity of combat over a sort period of time, relatively few casualties and a hostile threat which markedly diminished after several days. As planned, family support groups operated with great efficiency during the comparatively short duration of the deployment (3 weeks) and were highly effective in supporting the needs of the local community.

As the soldiers mobilized, family members initiated emergency telephone notification rosters and gathered in community meetings sharing information as it became available. Community gatherings initiated by commanders also provided updates on the mission status and on the anticipated mission duration.

By virtue of previous deployments to the Dominican Republic and Grenada, Fort Bragg, North Carolina, a community of 142,000 soldiers and family members was probably better prepared to manage the aftermath of the Operation Just Cause deployment. Mental health professionals and chaplains who provided support services and who in the past had focused on active duty soldiers, were now able to extend services to the limited treatment of dependents. Extensive unit debriefings allowed returning soldiers an opportunity to share and normalize experiences, understanding and preparing for whatever symptoms they might encounter.

Mental health care providers in the local community united to provide support to returning soldiers and their family members. Following a strong endorsement by the XVIIIth Airborne Corps Commander, leaders were debriefed by mental health professionals and advised of symptoms to watch for in their returning soldiers. Units participating in the debriefing process appeared to

have fewer cases of substance, spouse and child abuse, and they had improved reenlistment rates and unit morale (conversations with Division Psychologist Hazlett, 1990).

With the deployment of 82nd Airborne soldiers and the commencement of Operation Desert Shield, the Fort Bragg community expressed the same vigor and enthusiasm they had demonstrated in support of Operation Just Cause. After several weeks of increasing mobilization, the community came to realize the gravity and potential duration of this particular deployment.

The Deployment Cycle

Fort Bragg's experience differs from that of other military installations. Experience gained from repeated exposure to operational deployments has revealed several somewhat discrete stages of emotional response. Soldiers and community members progress through discrete the stages focusing on specific issues as they arise and demonstrating common responses to the deployment process. The stages are graphically portrayed in Figure 1.

Pre-Deployment

During the predeployment phase, couples focus on issues of disengagement. It appears that deploying soldiers and their spouses disengage in significantly different ways. While the deploying soldier may be future focused and interested in packing and preparing for going off to war, remaining spouses tend to focus on the here and now of saying "goodbye." As communication breaks down, anger accumulates and conflict arises. Conflict may also function to actually facilitate the separation process, making it easier to mask the difficulty of saying good-bye. Much of the emotional friction occurring during this phase lingers, only to be resolved later through letter writing or phone conversation, or to resurface upon reunion.

Further contributing to the difficulties of the Pre-Deployment phase is the uncertainty of the actual departure time. Some soldiers disappeared in a matter of hours, while many reported for numerous "pseudo-departures," putting additional stress on the family with repeated "good-byes." One family reported over eight such false alarms, before the soldier actually departed. This uncertainty further challenges the tolerance of all family members. The emotional upheaval experienced during the Predeployment phase usually persists for approximately 3 weeks until the family situation settles into somewhat of a routine (Jellen, 1984).

Deployment

After a realization that the deployment is not of short duration, attempts are made to settle into more of a general routine. In this deployment, the lack of a specific return date and the potential danger faced by the soldiers increased the levels of anxiety in families (McGee, 1991) resulting in the initiation of more long term coping mechanisms and attempts at sustainment. Some less prepared spouses, unable to cope with the additional stressors and the isolation, departed the community to receive support from the extended family. The majority of families, secure in the support network established at Fort Bragg, adjusted to a healthy coping routine. Spouses met periodically in small groups to discuss their concerns and participated in larger group settings to gather new information on specific topics (coping, stress management, and to quell rumors). Many spouses who left the Fort Bragg area reported a lack of understanding from their families and feelings of isolation when away from the military support network. Observers from the Department of

the Army in comparing the responses of various installations, interpreted the "business as usual attitude" at Fort Bragg as denial, when in fact, it appeared to be a much more healthy coping response, than closing buildings, packing up bags and "going home to mama."

Prehostilities

Although the risk to human life is present in every deployment and to some degree in extensive training exercises, the potential risks for massive loss of human life, as evidenced in the build-up for Operation Desert Storm had not previously been encountered. Contrary to expectations, there was an intense community interest in the casualty processing system, and family members began to prepare for potential losses. Some support groups viewed films on the Casualty Assistance Program, while others invited speakers from Casualty Affairs to speak at their meetings. Family members also took an acute interest in the processes for managing medical evacuation as the deadline for the ultimatum approached.

Hostilities/Casualties

When hostilities eventually broke out, family support group members increased the frequency of their meetings, depending more heavily upon the assigned chaplain for spiritual support. Due to the intensive preparation of the battlefield by air power and the limited duration of the ground war, casualties were remained remarkably low. This allowed families an opportunity to "breathe easier" as they waited for the return of their loved ones. "CNN syndrome" kept individuals focused on the news, despite advice to the contrary. Some families who had previously disciplined themselves into watching one or two news broadcasts a day were now hopelessly glued to their televisions. Family members were encouraged to remain active, utilizing the resources provided in the community.

Redeployment

The rapid end to the war produced anticipation that soldiers would be returning to their home installations quickly. Unfortunately, the demobilization process is almost as complex as the mobilization. It is impacted by transportation and mission requirements and cleanup. The evening news clips showing soldiers returning daily, served to heighten frustration in spouses over the uncertainty of the return of their loved ones. Some of the anger of the spouses was directed at the soldiers themselves, who they blamed for not being more personally aggressive in the redeployment process. The Division Psychiatrist for the 1st Armored Cavalry Division describes this post-war phenomenon as a "Cease Fire Let Down" manifested in unusual feelings and bizarre behaviors during the lull following the extraordinary stressors of combat. These emotions are not only driven by past experiences, but also by the anxiety associated with the reunion that is to come (Sutton, 1991).

Reintegration

Eastern Virginia Medical School research reported by Jellen, 1990, states that reunions and homecomings are more stressful than the initial deployment. The changes produced by the deployment affect every member of the family. When the needs of individual family members go unmet, they generate frustration, irritation and eventual anger. This anger may be directed at the unit, the military, or even at the loved one for abandoning the family. Without an outlet, much of the anger is stored only to resurface during the reunion/reintegration process. The successful reunion depends upon a number of

factors, not the least of which involves understanding the needs and the misgivings generated by their lack of need fulfillment.

There may be an unhealthy tendency to "compare wounds." Soldiers and spouses must be prepared to understand the reunion from each other's perspective and proceed slowly in getting reacquainted. Issues of trust, communication, respect, intimacy and management of the household all need to be addressed in time, however, pressing the issues only heightens anxiety and leads to greater frustration.

Returning soldiers reported that "although the airplane was capable of getting their bodies back home in 24 hours, it seemed to take 3 to 4 weeks for the mind to follow." The readjustment period can be characterized by physical symptoms, children's behavior problems and a spouse's lower tolerance for the demands of the loved one. In many cases, roles and responsibilities have become clouded during the absence with the spouse enjoying some new found independence.

Couples reporting the most rewarding reunions were those who "positively framed" the experience, treating it as a second courtship. They proceeded at a slow pace, attempting to improve communication by increasing it ten-fold. They limited their expectations and designed their reunion time in such a way as to have a brief reunion of the immediate family (several days), followed by a vacation for the couple (sans children) and an eventual inclusion of extended family members.

Similar to the adjustments required in the Pre-Deployment period, the most significant turmoil of the reintegration period appears to subside after a 3- to 4-week period. It is important to note that with the suitable resolution and positive outcome, this test of the family can actually result in a strengthening of family relationships, a phenomenon which may not have occurred without the challenge. The manner in which individuals respond to the reunion process is largely influenced by how well they have been educated and prepared by their respective communities. Ideally soldiers are prepared for family separation and the reintegration process through realistic and challenging training. Soldiers and family members who fully understand the requirements of a lengthy deployment, are better prepared to face the challenge and are less vulnerable to decompensating in face of the demand.

The Soldier and Family Support Teams

Soldier and Family Support Teams became the Heart of the Human Response to Operation Desert Shield Program at Fort Bragg. The proactive team approach had proven to be the most effective intervention at Fort Campbell following the Gander, Newfoundland, Crash. The teams were utilized at Fort Bragg to augment staff agencies and provide a "shot in the arm" for community resources just as coping mechanisms were wearing thin. Employment of the teams empowered family support group leaders and commanders to provide continued quality support to the community.

There were 15 Soldier and Family Support Teams (S&SFT) to support the installation and community. Each team included a mental health professional and a family physician to provide training in stress management and crisis intervention, a chaplain to provide spiritual support and an enlisted soldier to assist with administrative support.

Team members were trained in stress management, crisis intervention, grief leadership, debriefings, the Army Casualty System and management of reintegration issues. The Soldier and Family Support Teams introduced themselves to their supported populations with a formal briefing and began to provide support by assisting in solving problems unique to their assigned community. Teams coordinated and conducted a Health Fitness Assessment identifying areas needing focus and presenting classes targeted at the identified issues.

Representatives of all 15 teams met periodically to surface generic problems for resolution and forward difficult issues up the chain of command for resolution. Solutions to generic questions and problems were published in the installation newspaper in order that many could benefit from the answers.

In addition to the support provided family support group members and commanders, teams conducted debriefings for health care providers, notification officers, casualty assistance officers, graves registration personnel and other high risk populations. Reserve and active duty soldiers were provided briefings and debriefings enroute and upon return.

A Community Response to Stress
The teams also educated soldiers, spouses and commanders on the human response to stress, emphasizing it as a normal response. They encouraged and taught positive coping strategies, empowering individuals to move from intense emotion to acceptance without experiencing extensive symptomatology.

Following Operation Just Cause, similar debriefings which focused on understanding the human response to stress helped to reduce disciplinary actions, substance abuse, and spouse and child abuse. They also appeared to improve morale, increasing reenlistment rates and improving unit readiness. See Figure 2.

Teams explained the nature of chronic stress and the cumulative build up of stress since the occurrence of Operation Just Cause. Anniversary issues were addressed and families were informed of the stair-stepping effect of cumulative stress during the Operation Desert Shield deployment, the "no unit rotation" policy, the holidays, the beginning of Operation Desert Storm, the ground war and the impending stress of the reunion (Williams, 1987).

Team members were available at all times to answer questions, allay fears and quell rumors. Most important, they provided a powerful message to families and commanders--WE RECOGNIZE THAT YOU ARE STRETCHED BEYOND THE CAPABILITY OF YOUR RESOURCES, AND WE CARE.

LESSONS LEARNED

The Human Response to Operations Desert Shield/Storm Program with its Soldier and Family Support Teams aimed a preemptive strike at the stressors associated with a major deployment, demonstrating that a professionally integrated support system works and works well.

People do rely on previous experience. The theory and information from the Gander, Newfoundland, crash and from Grenada was instrumental in the development of The Human Response Program. As in previous experiences, the

assumed rush of patients didn't materialize. Knowing this kept effective health care systems from overreacting.

Contrary to the initial concerns of command, an educated and informed community proved to be much less hysterical. Information dispel rumors and builds credibility and confidence in the leadership structure. Frequent community seminars and timely communication through the media served to keep accurate information flowing.

Preexisting relationships within and between organizations are critical to a successful outcome. Knowledge of who to contact in various community organizations, resulted in a more efficient and effective delivery of services.

It is important to note that no amount of community support and involvement will alleviate all of the stressors. Some level of stress in the individual, the family and the community is necessary to facilitate change and growth. A sense of empowerment in the population, resulted in a strengthening and sense of growth which served to preparing the family and community structures for facing future challenges.

Positive Outcomes
The program was successful at stimulating local resources and affording a community far from the front lines to make effective contributions to the war effort. It provided a centralized forum for problem solving and an opportunity to normalize fear reactions through mutual sharing and encouragement. Many installation personnel got to interact for the first time in accomplishing an important war time mission. These new found relationships will undoubtedly result improved interactions for a long time to come.

A wealth of instructional material was generated by program participants and shared with the entire community as a result of these blended efforts. Educational seminars were conducted for care providers to assist them in managing stress in their patients. The program also served to expose family practice residents to an extensive experience in community medicine and in interacting with other service agencies in their community.

Instrumental to the success of the program were the efforts of many unsung heroes who contributed innumerable hours to ensure the well being of the military family.

A Time for Healing
Seldom does a community or nation come so close together, as when bullied by an external enemy. And if there is a common good to emerge from the tragedy of this war, it is the opportunity which it provided for this nation to gain some unity from it.

In reflecting on Operations Desert Shield/Storm, many comparisons and contrasts have been made to Viet Nam. Operations Desert Shield/Storm have provided an opportunity for the individual, the community and the nation to work through some of the unresolved guilt associated with Viet Nam. Along with welcoming home the soldiers of the Gulf War, communities have used this opportunity to give Viet Nam veterans their long awaited "Welcome Home" and in so doing have greatly advanced the healing process of an entire nation.

154

Through the experience of having successfully faced an external stressor of enormous proportion, citizens of this nation and other nations of the world have been able, in their unity, to see beyond their differences.

REFERENCES

Adams, V. (1990). Saddam Hussein: The most dangerous man in the world: U.S. News and World Reports.

Braza, J., & Braza, K. (1991). War and its aftermath. Hawthorne, NJ: Career Press.

Fairchild, L.S., & Griffiths, G.C. (1991). The human response to Operation Desert Shield/Storm. Unpublished manual. XVIIIth Airborne Corps, Fort Bragg, NC.

Hazlett, G. (1991). Personal conversations. Division Psychologist, 82nd Airborne Division, Fort Bragg, NC.

Jellen, L.K. (1984). The impact of deployment separation on Army families. (Report No. NP-84-6). Washington, DC: Division of Neuropsychiatry, Walter Reed Army Institute of Research.

Jellen, L.K. (1990). Minimizing the impact of deployment separation on military children. Unpublished handout. Office of the Chief, Army Community Service, Washington, DC.

McGee, P. (1990). Human factors in Operation Desert Shield: The role of family factors. Presented at 2nd U.S. Army Family Support Conference, Washington, DC.

Pyle, R. (1991). Schwarzkopf: in his own words. Middlesex, England: Penguin Books.

Sutton, L. (1991). Cease fire let down. Unpublished manuscript, 1st Armored Cavalry Division.

Williams, T. (1987). Post traumatic stress disorder: a handbook for clinicians. Cincinnati, OH: Disabled American Veterans Books.

Wright (Saczynski), K. (1987). The human response to the Gander air disaster: A summary report. (Report No. NP-88-12). Washington, DC: Division of Neuropsychiatry, Walter Reed Army Institute of Research.

Young, S., & Holden, M. (1991). The formation and application of an overseas mental health crisis intervention team: Part I-Formation & Part II-Application. Military Medicine, 156, 443-452.
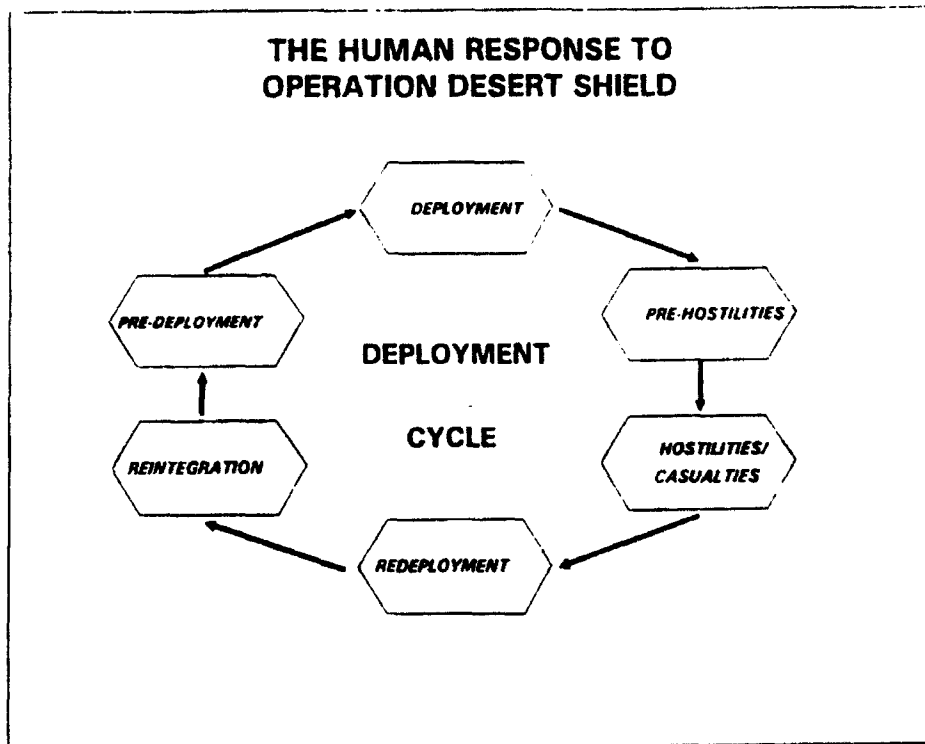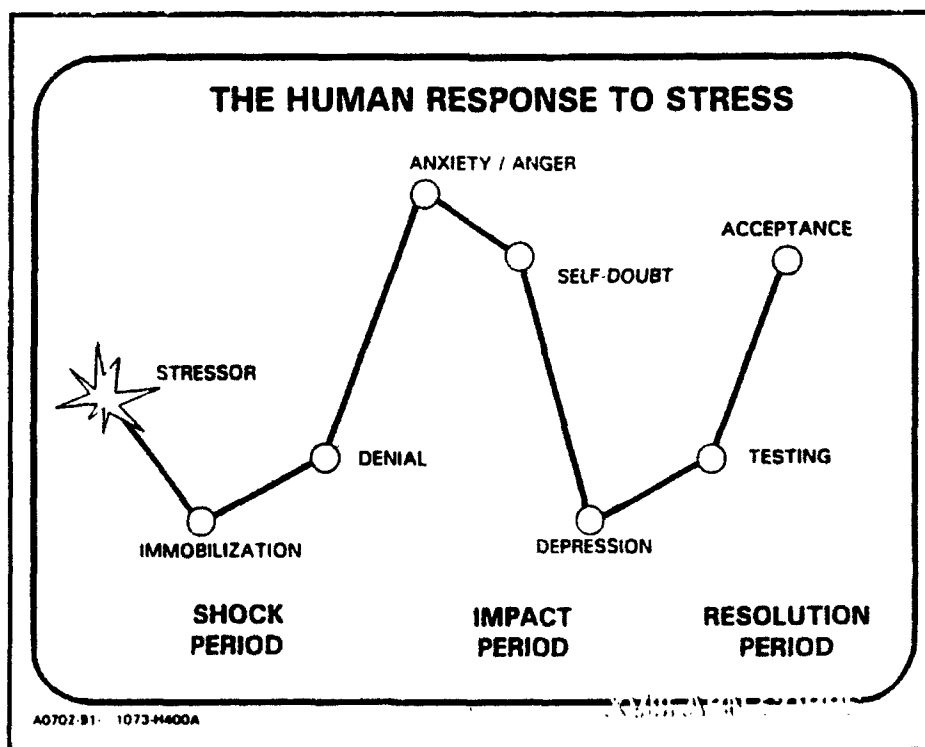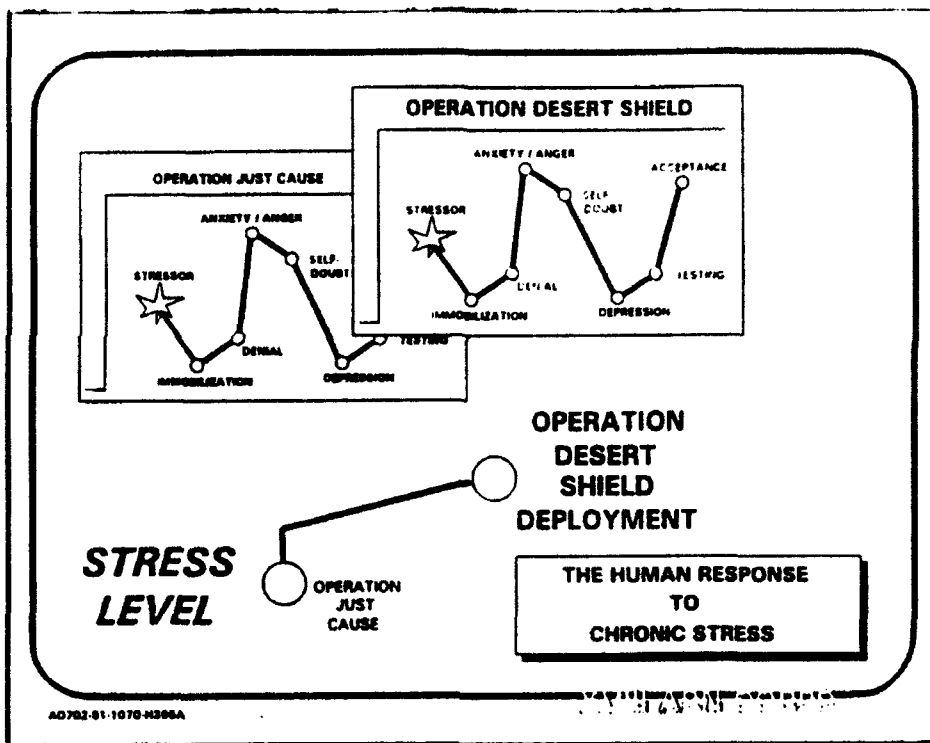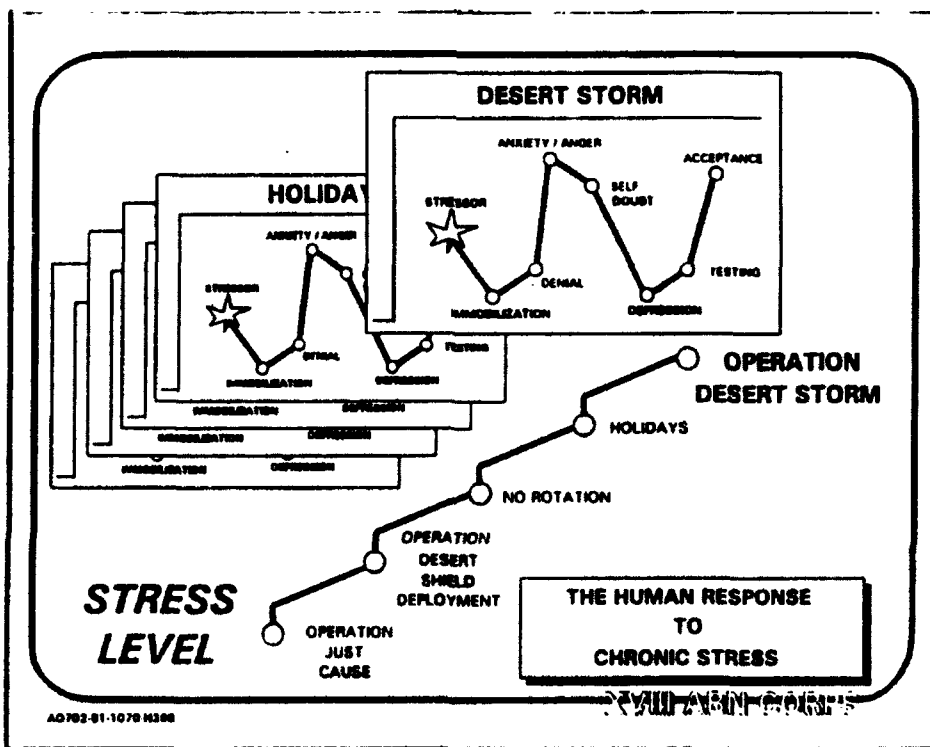
Figure 1

Figure 2

Figure 3

Figure 4

ASSESSING ENVIRONMENTAL STRESS DURING LONG-TERM DEPLOYMENT AND COMBAT

Mary Z. Mays, Ph.D.
U.S. Army Research Institute of Environmental Medicine
Natick, Massachusetts

An interdisciplinary research team joined the Aviation Brigade, 101st Airborne Division (Air Assault) in Saudi Arabia during Operation Desert Storm to assist the Commander in identifying biomedical factors affecting health and performance during long-term deployment and combat. Data on environmental stress, nutritional status, sleep-activity patterns, and psychomotor performance were collected from commissioned officers, warrant officers, noncommissioned officers, and enlisted members of the brigade. Questionnaire data from the period February 2-22,1991, indicated that soldiers were experiencing moderate levels of stress and were coping with it constructively.

In December 1990, the Commander, Aviation Brigade, 101st Airborne Division (Air Assault), requested assistance identifying biomedical factors affecting health and performance during long-term deployment and combat in Southwest Asia. An interdisciplinary research team from the U.S. Army Medical Research and Development Command joined the brigade in Saudi Arabia during Operation Desert Storm (January, 1991). The team was composed of three research psychologists, MAJ John R. Leu, CPT Kathryn A. Popp, both of the Walter Reed Army Institute of Research, and the author, MAJ Mays, from the U.S. Army Research Institute of Environmental Medicine (USARIEM), along with a nutritional biochemist, CPT Robert J. Moore, also from USARIEM, and a flight surgeon, COL John J. Traenor from the U.S. Army Aeromedical Research Laboratory.

METHOD

Participants

Data were collected from five units of the Aviation Brigade: the 1/101st, the 4/101st, the 2/17th, the Brigade Headquarters company and the Long-range Surveillance Detachment (LRSD). The sample included commissioned officers, warrant officers, noncommissioned officers, and enlisted members, who served as pilots, air crew, maintenance crew, headquarters staff, service support personnel, and infantrymen.

Assessment Tools

Data were collected on environmental stress, nutritional status, sleep-activity patterns, and psychomotor performance. A variety of methods were used to obtain real-time data while soldiers were engaged in combat operations, including observations, diaries, interviews, after-action reports, questionnaires, urinalysis, wrist-worn activity monitors, and a microcomputer-based synthetic-work performance test.

Environmental Stress

Symptoms of environmental stress have been measured using the Environmental Symptoms Questionnaire (3, 7, 9, 10, 11) and the Profile of Mood States (8) in both laboratory and field investigations of military performance under extreme environmental conditions (1, 2, 4, 5, 6, 11). Members of the 1/101st, the 4/101st, the 2/17th, and the LRSD used both questionnaires daily for 10-12 days to rate the level of emotional, physical, and intellectual

distress they were experiencing during the period February 2-22, 1991. Sample size varied from 7-10 per unit and not all units were available on all days. These instruments use Likert-type scales for rating symptom severity. However, for this preliminary analysis, data were reduced to 0 if the symptom or mood were rated as not experienced and 1 if the symptom or mood were rated as experienced to any degree. The symptom profile shown in Figures 1 and 2 and the mood profile shown in Figures 3 and 4 illustrate the incidence of environmental stress.

RESULTS

The degree of congruence between the symptom and mood data was quite good, in spite of the considerable psychometric differences between the questionnaires. Together they comprehensively assess the psychological and physiological correlates of stress.

Symptom Profile
It is clear from the symptom profile that soldiers were in generally good health and good spirits. Mental strain was characterized largely by sleep disturbances, rather than by decrements in cognitive functioning. The disruption in sleep cannot be attributed to physical fatigue, given that the reports of muscle strain and exertion were quite low. Emotional strain was characterized by impatience, rather than nervousness. The incidence of upper respiratory infection was moderately high, but was apparently not severe, given the low incidence of other eye, ear, nose, and throat symptoms. The higher incidence of eye irritation and coughing compared to other symptoms of illness can probably be attributed to the daily encounters with the blowing, talcum-like sand. In spite of the traditional griping about the constant diet of Meals-Ready-to-Eat, there were few symptoms of gastrointestinal upset. The frequency of cold-weather symptoms reflected the fact that nights were cold (30°F) in February in this area of operations. Most soldiers slept in unheated tents or dugouts. The fact that backache and sleep disturbances were among the most commonly reported symptoms may be related to the cold nights and sleeping conditions.

Mood Profile
The high percentage of soldiers reporting positive moods on the vigor-activity subscale indicates that soldiers had adjusted well to the conditions. The equally high incidence of moods comprising the friendliness subscale suggests that unit cohesion was high. The vigor-activity and fatigue-inertia data taken together indicate that although the report of fatigue was common, it was not severe. The low incidence of confusion-bewilderment moods suggests that decrements in cognitive functioning were not commonplace. The mood questionnaire assesses emotional strain in some detail, yet the pattern of moods reported on the tension-anxiety, depression-dejection, and anger-hostility subscales leads to the straightforward conclusion that soldiers felt impatient, rather than nervous or worried.

DISCUSSION

The symptom and mood profiles indicate that soldiers were coping constructively with stress. This should not be taken as evidence that environmental stress was minimal. The weather was harsh. Subsistence was adequate, no more. Living conditions were primitive. Routine activities were governed by the possibility of attack. Although the "ground war" had not

begun, combat was eminent and on at least two occasions was scheduled to begin the following day. These units were engaged in flight operations throughout the period, some of which resulted in contact with the enemy, much of which was quite demanding due to the requirement to fly low over unpredictable terrain, at night, or in bad weather. The professed fearlessness of these soldiers may be attributable to the fact that the majority of the participants had been training in Saudi Arabia for 6 months (Operation Desert Shield). The desire to "get it over with and get back home" was a commonly expressed sentiment. The positive nature of the symptom and mood profiles seems to reflect a shared sense of mission and readiness which allowed the soldiers to constructively cope with the stress inherent in the situation.

REFERENCES

Askew, E.W., Munro, I., Sharp, M.A., Siegel, S., Popper, R., Rose, M.S., Hoyt, R.W., Martin, J.W., Reynolds, K., Lieberman, H.R., Engell, D., & Shaw, C.P. (1987). Nutritional status and physical and mental performance of special operations soldiers consuming the ration, lightweight, or the meal ready-to-eat military field ration during a 30-day field training exercise. (USARIEM-TR-T7-87).

Burr, R.G., Woodruff, S.I., & Banta, G.R. (1990). Associations between mood and specific health composites during Navy Persian Gulf operations. (Technical Report 90-42). Naval Health Research Center.

Fulco, C.S., Cymerman, A., & Rock, P.B. (1985). A software package for administering and monitoring the environmental symptoms questionnaire (ESQ III). Aviation, Space, and Environmental Medicine, 56, 57-61.

Hirsch, E., Meiselman, H.L., Popper, R.D., Smits, G., Jezior, B., Lichton, I., Wenkham, N., Burt, J., Fox, M., McNutt, S., Thiele, M.N., & Dirige, O. (1984). The effects of prolonged feeding meal, read-to-eat (MRE) operational rations. NATICK-TR-85-035.

Johnson, R.F., Branch, L.G., & McMenemy, D.J. (1989). Influence of attitude and expectation on moods and symptoms during cold weather training. Aviation, Space, and Environmental Medicine, 60, 1157-1162.

Johnson, R.F., & Merullo, D.J. (1990). Reevaluation of sodium requirements for work in the heat: Subjective reports of heat illness. Proceedings of Nutrition for Work in Hot Environments. National Academy of Sciences.

Kobrick, J.L., & Sampson, J.B. (1979). New inventory for the assessment of symptom occurrence and severity at high altitude. Aviation, Space and Environmental Medicine, 50, 925-929.

McNair, D.M., Lorr, M., & Droppleman, L.F. (1971). The Profile of Mood States. San Diego: Educational and Industrial Testing Service.

Sampson, J.B., & Kobrick, J.L. (1980). The environmental symptoms questionnaire: Revisions and new field data. Aviation, Space, and Environmental Medicine, 51, 872-877.

Shukitt, B.L., Banderet, L.E., & Sampson, J.B. (1990). The environmental symptoms questionnaire: Corrected computational procedures for the alertness factor. Aviation. Space. and Environmental Medicine, 61, 77-78.

Steele, T.P., Kobus, D.A., Banta, G.R., & Armstrong, C.G. (1989). Sleep problems. health symptoms. tension/anxiety and fatigue during wartime cruising in a moderately high heat/humidity Naval environment. (Technical Report 89-21). Naval Health Research Center.

DESERT STORM
CRITICAL INCIDENT STRESS DEBRIEF CHALLENGES:
32ND AIR EVACUATION GROUP, KELLY AFB, TEXAS

Margaret Cole Marshall, Lt Col, USAF, NC
Lorraine Boudreau, Col, AN, USAR
Paul J. Mann, Capt, USAFR, NC
Cynthia D. Krampitz, Capt, USAFR, NC

What was happening? The 32nd Air Evacuation Group, an Air Force Reserve unit at Kelly Air Force Base, had deployed units as part of Desert Storm to Saudi Arabia, Turkey, Germany, England, and within the CONUS. As each member returned, which was not at the same time, the chief nurse noticed that there was increased tension and conflict among various personnel, anger and stress related behavior in her nursing staff. The unit was not settling back into its usual pattern of functioning. At this point the chief nurse talked with her two flight nurses, who were also mental health nurses, and asked how this situation could be resolved. The two mental health nurses then looked for resources outside the unit to be brought in as consultants and chose two mental health clinical nurse specialists.

They recommended using Jeff Mitchell's Critical Incident Stress Debriefing (CISD) model. Since the unit did not fit the usual pattern of meeting with staff within 72 hours after the critical incident (for some it was as long as 6 months later), they assessed how this plan could be adapted to benefit the participants. This was the challenge.

CRITICAL INCIDENT STRESS DEBRIEFS

Critical incident stress debriefs were developed by Jeff Mitchell, a psychologist from the University of Maryland Emergency Health Services Program, in the 1970s to support health care workers and rescuers after an unusual event that had a powerful emotional impact on the workers or rescuers. It is a group method that helps the workers to process and defuse the emotional aspects via an educational, preventative and supportive environment. Mental health professionals are used on a regular basis after critical incidents--such as plane crashes, fires, shootings, building collapses and other catastrophes where there are many injuries or deaths--to help the providers deal with their own reactions and provide crisis intervention. Health care providers and rescuers are at risk as potential victims because they do not necessarily think they are at risk, and therefore do not take the necessary measures to ensure their own mental health.

There is a certain structure to CISDs. They are usually 2 to 4 hours in length and characteristically occur 2 to 5 days after the incident. The event is reconstructed and the psychological reactions of the providers are evoked. Part of the process involves education on stress reactions, such as post traumatic stress disorders.

CISD CHALLENGES

The facilitators working with the 32nd AEG were challenged to modify CISD to fit into its usual organizational functioning. A meeting was held with the leaders (i.e., commander, chief nurse, and NCOIC). Approval for this project

needed to come from a variety of sources. It took time to put together the necessary paperwork so that everyone would know what we would be doing, how it would be done, and what the anticipated results would be. Most of all, this project would need the support from the leadership in the organization if it was to be effective in getting people to the meetings. What was most apparent to the nursing consultants for this project was that the human element and the emotional aftermath of Desert Storm needed to be dealt with and resolved throughout the military, and these were not necessarily being addressed by the services except in certain pockets. To think that the leadership here would have the foresight and courage to support this undertaking was impressive.

Usually, when dealing with a critical incident, it is one event. For this organization, it was many. Personnel were assigned to CONUS (Andrews AFB and Kelly AFB), England, Germany, Turkey and Saudi Arabia, and all had their own stresses. All were part of Desert Storm, but their experiences were very different. One of the issues with the staff was that they had trained to be part of a team and when the time came for deployment, they were split up and did not go to the same places or even with their smaller teams.

As a reserve unit, they were scheduled to work a weekend a month. They came from a variety of places in Texas, Colorado, and Kansas. With a short notice deployment, it was difficult to move out of apartments, leave jobs, and plan for children, financial responsibilities, and pets. For some, returning was more difficult than was leaving; the transition back into civilian jobs took more effort and time than anticipated.

After returning from Desert Storm, each member was given the opportunity to skip 3 months at the unit. Some opted to do this. The staff returned from deployment over a long period of time (up to 4 months) and returned, not as a unit but in small groups or individually. This made the project difficult.

Jeff Mitchell's model suggests that there should be trained, organized, CISD teams. This was not feasible; they were not available. The facilitators for the 32nd AEG CISD were four mental health nurses. Two had done debriefs before, and two had not. So, an experienced debriefer was paired up with a mental health nurse not familiar with the debriefing process. This turned out to be a good experience for all four. They held regular meetings to plan and to develop the program. Each made contributions to the planning, development, and implementation of the total CISD project. As part of the planning, a survey was developed to give to each participant so that some data could be collected and an assessment of the briefings made. A total of 90 surveys were completed and the results were tabulated through the office of A. David Mangelsdorff, Ph.D.

Each month at the unit, there were usually two 2-hour debriefs and people were assigned to attend a particular debrief. In each group there was a mix of the staff from each of the deployed sites, depending upon who was available to attend meetings and the varied attendance at monthly weekend training. The groups ranged from about 6 to 15 at a time. The group process was structured as designated by the Jeff Mitchell model. It was particularly important to start the briefings by explaining what they were, how they could be helpful, the confidentiality issues, and how participation and sharing, including filling out the survey, would benefit attendees. Participants became very vocal about what happened and how they felt. They laughed, became angry, and sometimes cried when sharing their feelings. The debriefs became a very

profound experience for many of them, and they thanked the debriefers for
having these meetings.

THE CISD SURVEY

To obtain data that would help the facilitators understand the process,
the four mental health nurses evaluated tools that others used for assessing
stress and decided that it was too problematic to use someone else's tool and
that they would not provide all the desired information. We then started the
process of developing our own instrument. This was approved by the Air Force
at Randolph AFB and became USAF SCN 91-54. The final product contained five
different sections and a total of 182 questions. It took about 20 minutes to
complete the questionnaire. No name or social security number was requested to
insure confidentiality. The first section asked demographic information: age,
sex, where deployed, how long, marital status, etc. The second section
contained blocks in three columns to be checked off. They contained stress
indicators before deployment, during deployment and currently. Such items as
suicidal thoughts, sleeping difficulties, eating difficulties, alcohol use,
physical symptoms, exaggerated feelings of anger and nightmares were among some
of the questions. The third section asked three questions about their unit and
career intentions. The fourth section had three questions and asked how
stressed they felt before deployment, during deployment and currently. There
was a 10 cm line drawn from "No stress" at one end to "high stress" on the
other and they had to put an "X" where they felt it appropriately showed their
stress level. The fifth and last section contained eight open-ended questions
such as: What was the most negative during deployment? and What was the most
stressful or troublesome event that occurred during deployment? We did content
analysis on the last eight questions.

The surveys were completed at the beginning of the debriefs and were not
looked at until after the group left. The information that was included or
discussed in the survey did not necessarily surface during the CISD debriefing.
This gathering of information added another whole new dimension to the
evaluation process. It gave some people an opportunity to share information
that they either were not comfortable sharing, or had not an opportunity to
share during the debriefs.

RESULTS/EVALUATION

Part of the results of the debriefs came from the surveys. All were asked
if they wanted debriefs in the future or would recommend debriefs to others.
Without exception, all recommended that debriefs be done on all aspects of
deployment. The openness and sharing that occurred in the debriefs was an
indication of the need and importance to the individual. Observations by the
facilitators included the healing that needed to take place and did take place
within the unit and the individuals. Individuals were referred to outside
mental health professionals when indicated. However, this was problematic as
there was some miscommunication among different government agencies as to what
was available to reservists for counseling follow-up after Desert Storm. To
ensure that reservists obtain necessary counseling, one individual needs to be
designated as liaison between the unit and other government agencies. The four
facilitators, mental health nurses, would recommend that mental health nurses
be trained to do CISD and be used as a resource for this purpose at the various
facilities and units. This may be the first time that an all mental health
nurse CISD team has played this role, and they played it very successfully.

HUMAN PERFORMANCE RESPONSE TO ENVIRONMENTAL STRESSORS DURING EXTENDED AT-SEA OPERATIONS IN THE PERSIAN GULF

Guy R. Banta, Ph.D.
Naval Health Research Center
San Diego, California

As early as 1988, the Navy's medical research and development community was asked to describe and evaluate human performance response during sustained and/or extended at-sea naval operations in a hostile, high heat, and humid environment such as the Persian Gulf. Prior to hostilities in the Middle East, U.S. Navy ships and men had never been exposed to this type of environment.

Since then, we have made a number of multi-month deployments to the Gulf including extensive involvement during Operations Desert Shield and Storm. Barring the environmental hazards left by Iraq, the Middle East and Persian Gulf are beautiful areas except for one thing--HEAT! Rainfall is about two inches a year, summer temperatures can reach about 130°F, and relative humidity nears 80-90% in the Gulf and 10-20% in the desert. Even the Gulf water is approximately 97°F. In fact, in November of 1990, the water temperature registered 100°F.

Certainly, for the last 3 years, the Persian Gulf has been considered an area of threat to the U.S. Navy/Marine Corps (i.e., on-shore missile attacks, air attacks, small boat surface attacks, and uncharted mines). The Navy's presence has principally been with various surface ships, Special Forces, divers, Marines, and helicopter support. During the war, tactical aircraft and aircraft carriers were added. Even in the laboratory setting, I believe one can appreciate the difficulties of conducting human performance research in such adverse environments. But, in the Gulf we had the opportunity to take a picture, if you will, of naval at-sea operations and address such issues as:

HEAT	SUSTAINED/CONTINUOUS OPERATIONS
TENSION/ANXIETY/FEAR	FATIGUE
MOOD	COGNITIVE PERFORMANCE
BOREDOM	SLEEP LOSS
PHYSICAL WORK LOAD	

In other words, we had the opportunity to assess operational relevant criteria measures that could be used to assess stress effect in laboratory simulation.

The stressors and areas of interest varied across numerous job tasks and locations: topside gun mounts, observation, engine rooms (temperatures on steam driven ships reach up to 150-160°F), Navigation, Command-In-Control, Combat Swimming/Diving, Flight Deck, Aircrew, and other deck responsibilities. The two main stressors of interest quickly became heat and irregular work/rest/sleep, and especially, the interaction or synergistic loading of these stressors on behavior, cognition, and physiological response.

This paper will briefly present some of our findings for sleep pattern issues and environmental health symptoms from the period prior to the start of the war. Also included is some discussion of the effectiveness of a heat

stress countermeasure introduced and distributed widely during the war--a MICROCLIMATE COOLING VEST.

Our design was to assess a number of performance (behavioral and physiological) responses pre-, during, and post-duty standing. Responses evaluated and presented in this paper include: cardiac response (heart rate), skin and body (rectal) temperatures, response to behavior questionnaires, and sleep history.

RESULTS

Documentation of sleep patterns (Figure 1) associated with this stressor environment revealed difficulty with falling asleep, and with quality of sleep; and, further, that sleep inertia affected greater than 25% of the personnel surveyed. The most frequently indicated reason for sleep difficulty was "thoughts running through my head" (65%), with 13% reporting, "too much noise," 16% "feeling foggy," and 26% indicating that they were "sleepy," "fighting sleep," or were in an "almost asleep" for up to 3 hours after awakening. A significant percentage of a cross-sectional sample reported, "sometimes falling asleep on the job though trying to stay awake."

Greater than 37% of those surveyed reported severe fatigue (Figure 2). The most reported environmental health symptoms were: mental fatigue, heat distress, and muscle fatigue (Figure 3). Looking at changes in mood factors for fatigue during pre/post General Quarters revealed a significant increase in fatigue and confusion, and a decrease in vigor (Figure 4). When comparing responses from a crew on a guided missile cruiser (CG), who had been at sea for a number of months, with those of a fairly new crew on a frigate (FFG), pre/post changes on the FFG were not as dramatic. Yet, there was a greater overall fatigue and anger on the FFG, not uncommon for personnel who have not yet adjusted to their new environment.

Exposure to heat is well known to dramatically influence physiological response and mental function. Our goal was to evaluate a "quick-off-the-shelf" countermeasure that might reduce performance degradation and potential heat injury. The heat stress countermeasure evaluated in theater was an individual passive cooling vest containing frozen ;hermostrips (ice) that retain their cooling power for approximately 2 hours in 110-120°F temperatures (Figure 5).

At temperatures greater than a WBGT index of 90°F, physiological responses when wearing the ice vest (specifically cardiac strain [HR] and skin temperature) were significantly reduced (Figures 6 and 7). A WBGT index is a weighted index of dry bulb, wet bulb, and black (radiant) bulb temperatures. Figure 8 dramatically demonstrates cardiac strain during high heat and work for aircrew during helicopter flight and the impressive effect of the cooling vest.

SUMMARY

The purpose of this paper was to briefly present some operational realities associated with human performance in high heat and continuous military operations, specifically, like those experienced by Navy/Marine Corps personnel serving in the Persian Gulf. In addition, the goal was to stimulate questions, address issues, and provide some answers about the use of basic science research to address operational mission requirements, and how the

166

results of that research might be used to maintain or enhance human performance.

FIGURE 1
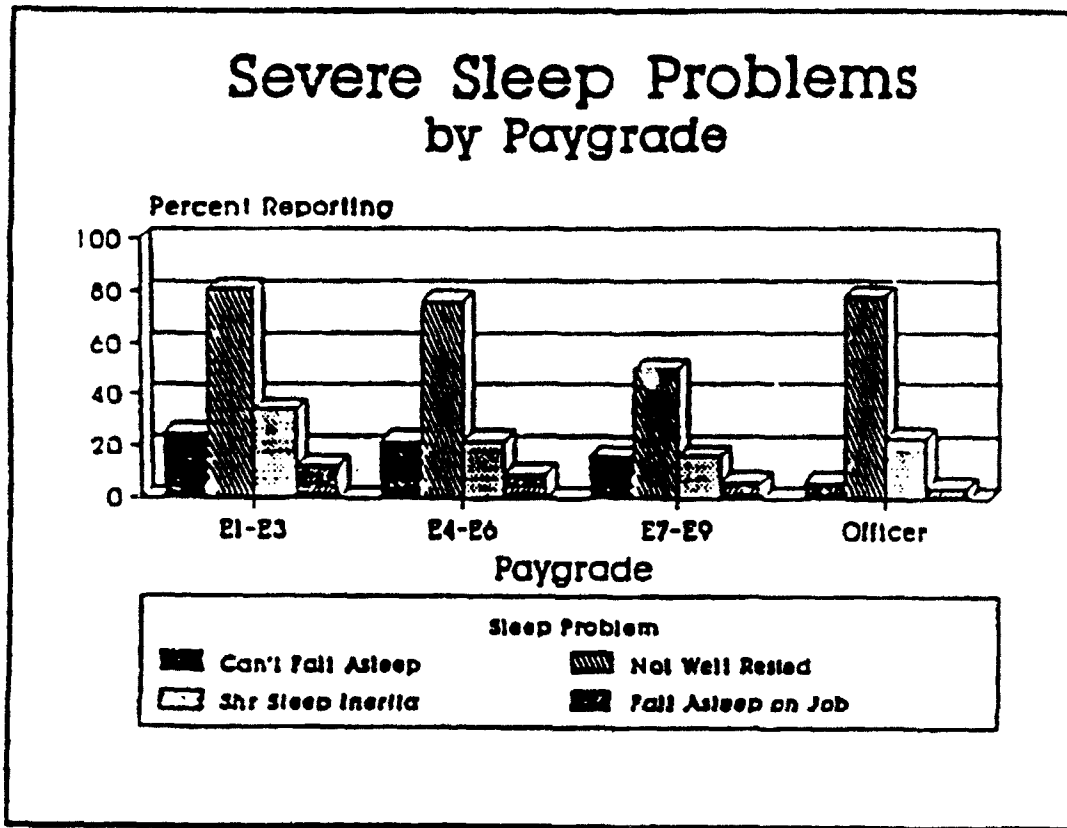
Figure 1. SHIPBOARD SLEEP PROBLEMS - Persian Gulf; data from Steele, et al. 1989

FIGURE 2

Subjective Fatigue
by Paygrade

Percent Reporting
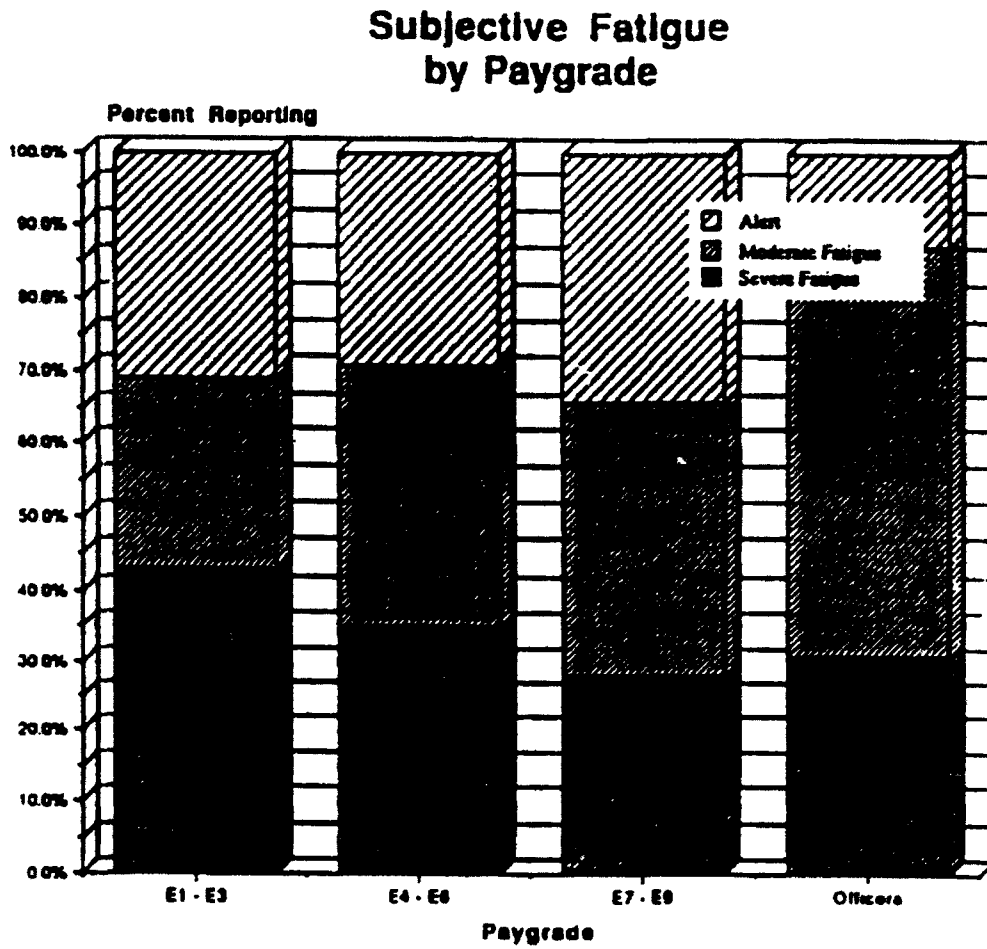
Figure 2. SHIPBOARD FATIGUE - Persian Gulf
data from Steele et al., 1989

FIGURE 3
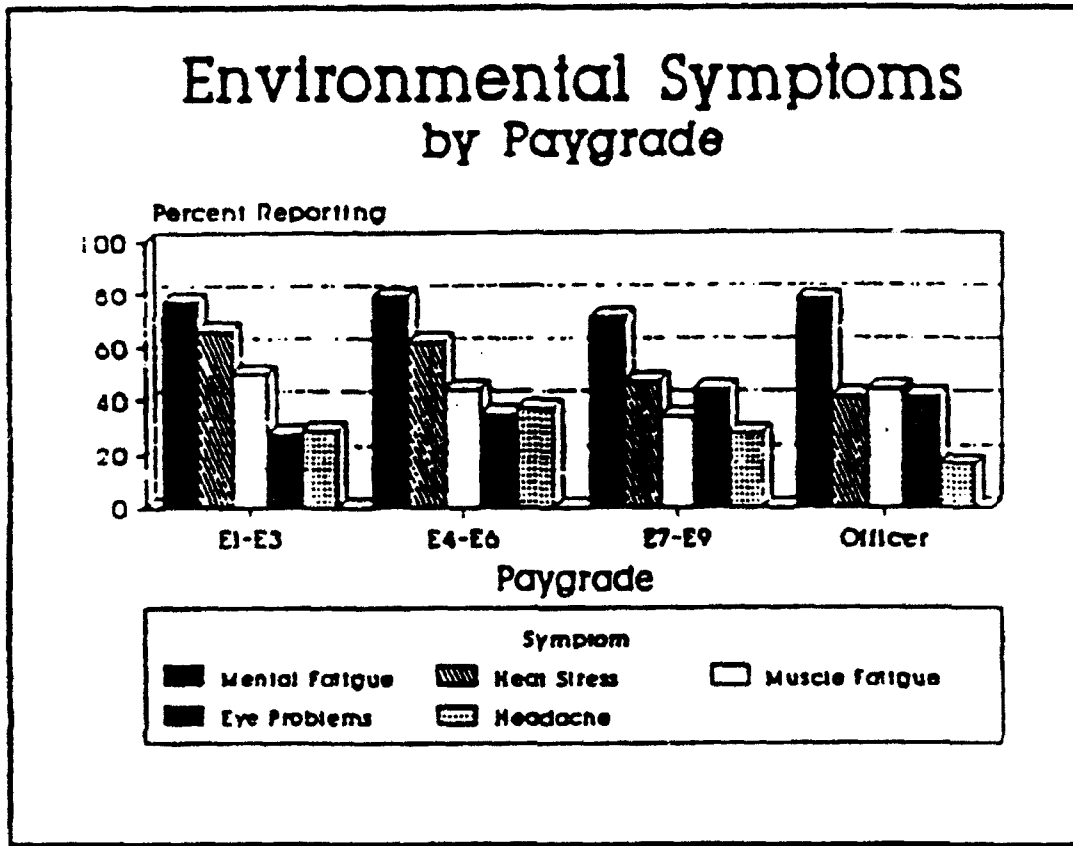
Figure 3. ENVIRONMENTAL HEALTH SYMPTOMS – Persian Gulf
         data from Steele et al. 1989

FIGURE 4
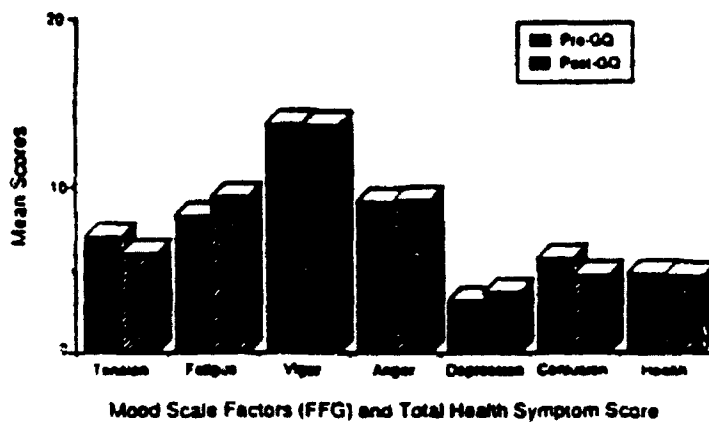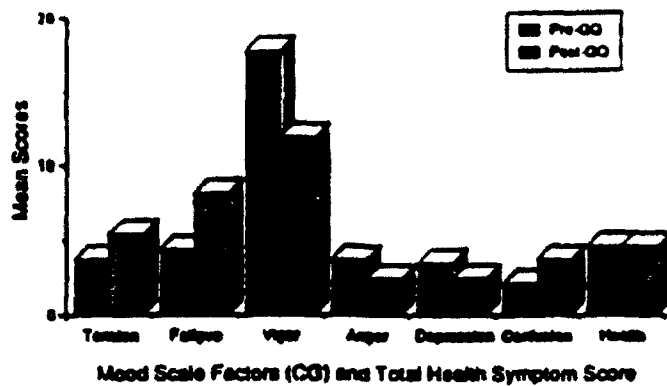
Figure 4. MOOD/FATIGUE RESPONSES - Persian Gulf
Data from Burr et al. 1989

FIGURE 5

Figure 5.   PASSIVE COOLING VEST WITH FROZEN THERMOSTRIPS
(NHRC TR#90-30 - Banta and Braun, 1990)

FIGURE 6

ENGINEERS AND TOPSIDE PASSIVE COOLING
AND HEART RATE BY WBGT
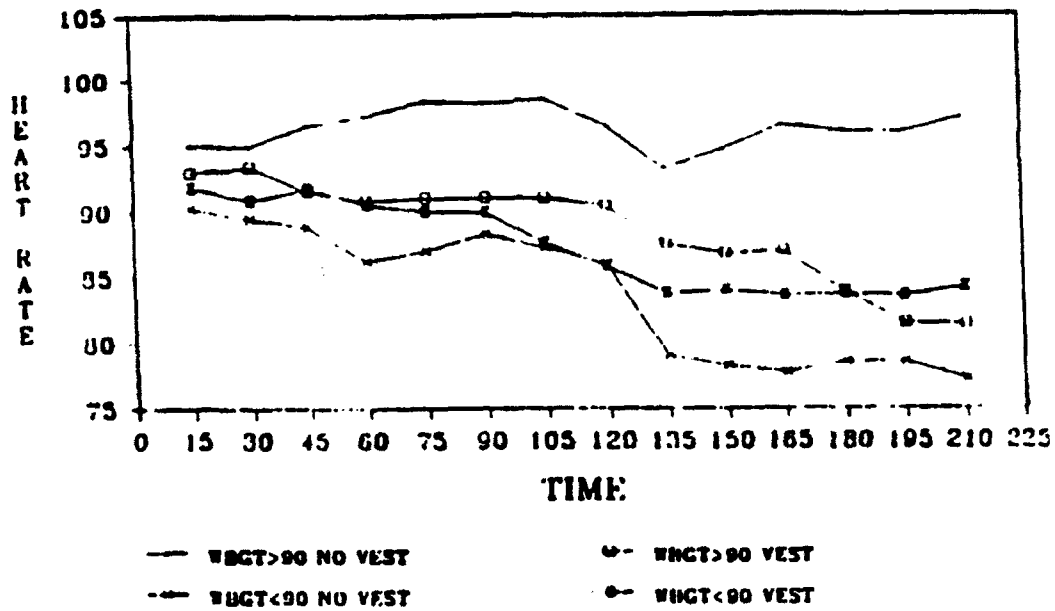
Figure 6. HEART RATE AND MICROCLIMATE COOLING EFFECTS - Persian Gulf
Data from Banta and Burr, 1990

FIGURE 7

ENGINEERS PASSIVE COOLING AND SKIN TEMPERATURE BY WBGT
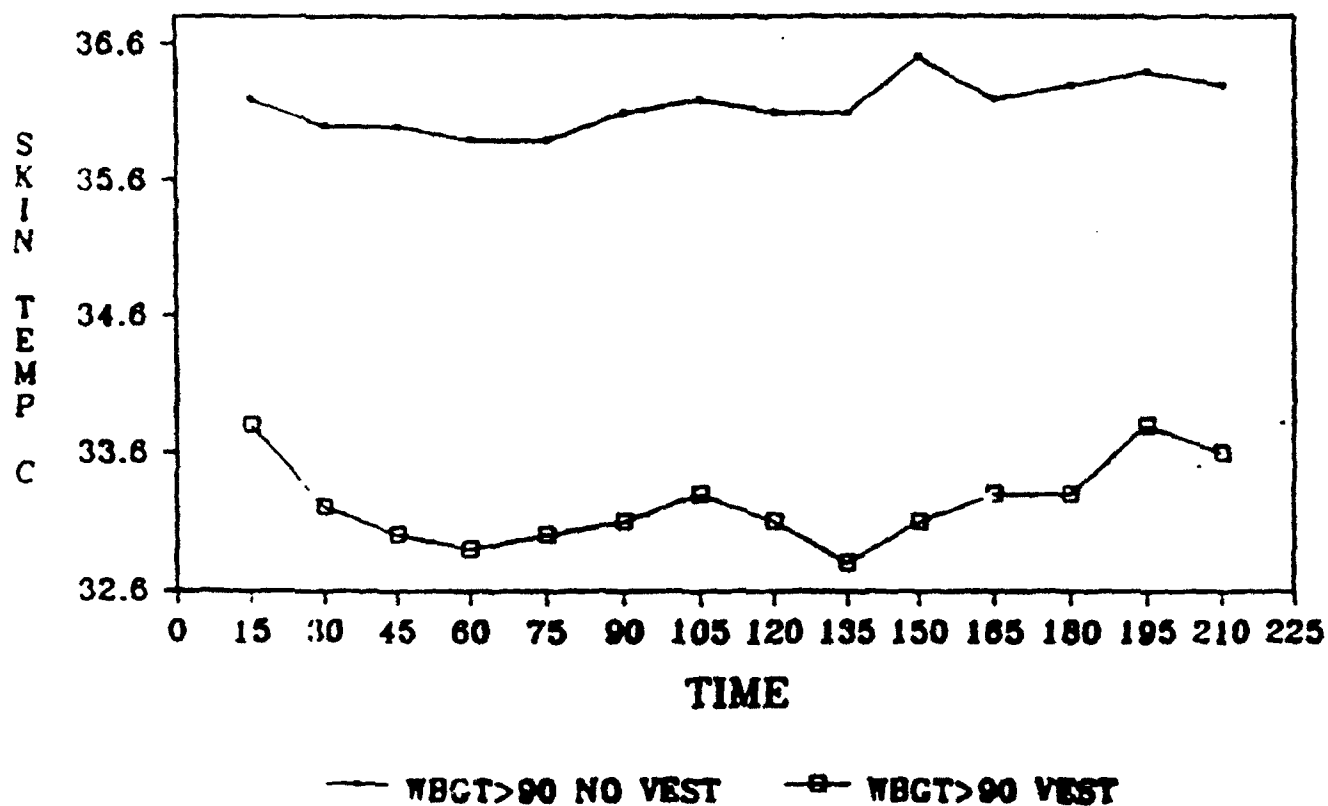
Figure 7. SKIN TEMPERATURE AND MICROCLIMATE COOLING EFFECT - Persian Gulf Data from Banta and Burr, 1990

FIGURE 8
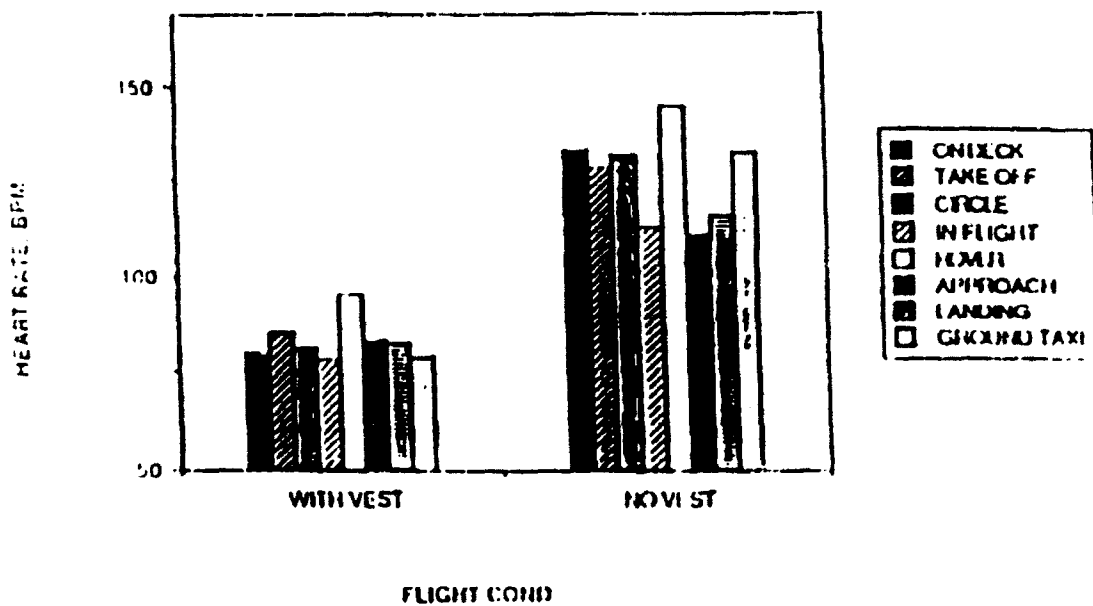
Figure 8. HEART RATE AND MICROCLIMATE COOLING EFFECT - Persian Gulf
Data from Banta and Braun, 1990

CANADIAN FORCES CRITICAL INCIDENT/COMBAT STRESS INTERVENTION TEAM IN THE GULF WAR

Michael J. Kelly, M.D.
Canadian Forces Halifax
Halifax, Nova Scotia

Following the invasion of Kuwait by Iraq on August 2, 1990, Canada reacted deliberately and without delay creating a number of military task groups in support of the United Nations resolutions.

Canadian Forces personnel eventually numbered approximately 4,000 in theatre, including a naval contingent in the Persian Gulf, CF-18 squadrons at Qatar, joint headquarters in Bahrain, 1st Canadian Field Hospital in northern Saudi Arabia, and associated support and security staff.

With the establishment of Canadian Task Groups in the Gulf there was not only potential for war-related casualties, but for man-made accidents/disasters, and critical incidents. In September 1990, the Office of The Surgeon General authorized the development of a mobile rapid response Critical Incident Stress Debriefing Team. Its initial mandate was to "provide a specialist debriefing/counseling capability to prevent post traumatic stress disorder," and consisted of a military psychiatrist, psychiatric nursing officer and a social work officer. The team was on standby from September until mobilized on January 8, 1991.

The Canadian Army (Mobile Command) and medical services had developed "on paper" a Combat Stress Management Response Plan patterned after allied programs. There was though, no comprehensive program in operation to educate soldiers or leaders on detecting stress in self or others and how to cope with it, nor was there any training or preparation of any significance for medical personnel. This relates to lack of manpower and overriding day-to-day clinical demands placed on mental health professionals, but a contributing factor is the lack of "ownership" of prevention and treatment of psychological/critical incident/combat stress issues. Given this, it was not surprising that not only was the team "making it up as we go along," but a proportion of our peers and senior personnel were indifferent, at times skeptical, and infrequently even hostile. Compounding this was the lack of family support units on most bases in Canada. The Canadian Forces Medical Services are not responsible for dependant care, and it is only recently that attention is being given to the welfare of family members, especially as it pertains to deployments and reunions. Over the past 2 years some progressive commands have established peacetime critical incident stress debriefing teams.

Canadians perceive themselves as a peaceful, non military nation, but their military forces have a long and distinguished history, though no more immune to stress than other combatants. It has been estimated that over 10,000 Canadians were diagnosed as "shell shocked" in World War I, and two-thirds of them were still pensioned in 1939. A significant number of the 25 Canadian soldiers shot by firing squads during the Great War no doubt were combat stress or psychiatric cases. In the recent fascinating review of battle exhaustion in Canadian troupes during World War II, Copp and McAndrew (1990) and McAndrew (1988), military historians, commented that "throughout the war neither operational commanders nor their medical staffs could quite fully decide

whether the neuropsychiatric phenomenon, like that of venereal disease, was more a matter of discipline or medicine, the proper province of doctors or the keepers of field punishment camps." They concluded that "The stress casualty phenomenon partly concerned the psychology of the individual soldier: discipline like medicine, psychology and psychiatry can inform us about it. But it also had a broad social dimension embracing national cultures, manpower and recruiting policies, training, leadership, unit cohesion, and regimental traditions."

With all the above in mind, it was with some trepidation team members witnessed the 15th of January deadline fast approaching. The team had been advised that it would probably remain in Canada only to be tasked if there was a critical incident, but in January we were suddenly mobilized, deployed, and on the ground operational at Headquarters, Bahrain by January 19, 1991. By that time, the concept of the team's responsibilities as perceived by its originators in Ottawa evolved into the following: "To prevent and treat post-traumatic stress symptoms and combat stress reactions (through) lectures and discussions on post-traumatic stress disorder and combat stress reaction; critical incident/stress debriefings, brief limited psychiatric/psychological support, treatment and/or counselling for individuals suffering from stress related symptoms or psychiatric conditions; and treatment planning and recommendations for patients requiring evacuation due to PTSD/CSR symptoms of a chronic nature."

Having some training in critical incident stress debriefing using the Mitchell model, but none in combat stress, the team improvised and tested a number of concepts and protocols at Bahrain, finding the following effective and efficient. All new arrivals to Headquarters were introduced to the team and its role as part of their orientation package. Team members were available on a 24-hour basis for assessments or referrals, and as consultants to supervisors at all levels on matters relating to personnel problems. Team members became familiar with personnel and units by "walk arounds" and visits at their places of work, becoming better aware of their unique roles and stressors. Formal presentations were given to groups of approximately 12 on issues of combat/critical incident stress and psychological aspects of war and desert operations (Psychological Aspects of Desert Operations, 1990). The small group presentations, although time consuming, allowed for ventilation and expression which did not occur in larger groups.

Personnel who requested an extension of their tours were interviewed to ensure the extension did not place the unit, the member, or his or her family at unacceptable risk or hardship. Servicemembers repatriating were briefed on the "emotional decompression" they might experience on returning to Canada and many were supplied with an information package prepared at Headquarters from available literature. I note with interest that our "ideas" were in no way novel, and in fact similar to other coalition teams who had no formal training and were "winging it" too. It was certainly not as extensive or comprehensive as the American Army Program.

After the team had developed a plan of action, members were dispersed to the Canadian Units, with a member remaining at Headquarters, one was deployed to the F-18 Air Base, and another to the Field Hospital. The ships were well represented by medical officers and other support personnel, and no team members were on board, though contingency plans were made to quickly re-integrate and deploy to a ship if there was a critical incident or other need.

Situations or circumstances that were stressogenic or had the potential to cause serious problems with morale and combat effectiveness, especially if the war had been prolonged, will be reviewed. This is meant to be constructive and the intent is not to detract from the exemplary professionalism of service personnel, but rather to comment on human factors not often recognized or acknowledged, at least in Canadian Commands.

Team members had many common experiences and individually unique ones reflecting their own environments, units and personalities. The senses were acutely tuned, driven by information overload. At times there was more information from CNN than from intelligence briefings. It was a surrealistic experience, if not unnerving to be watching television in your hotel room when CNN announces that scud missiles have been fired off your way before the actual air raid warning. Most individuals became deconditioned and blasé though a few became increasingly anxious and prone to panic.

A prominent fear was that of failure or disgrace, letting one's peers or buddies down, and not living up to standards set by oneself or others. This was prevalent in officers and senior NCOs, and while it could be a healthy driving force, when it permeated throughout the unit many felt intimidated, working themselves into exhausted states. Senior officers worked long hours for months at a time with no days off, primarily out of dedication to duty, but also taking their cues from their own supervisors who did not rest. In the short term, under intense wartime conditions this was acceptable, but it appeared to be prolonged and predated the onset of actual conflict by months, jeopardizing individual's reserves when they needed it most. Though the importance of "downtime" was emphasized, the team was often informed that "It was not a problem", or "No stress here". There were no measurements or surveys available to document this adequately, or present a stronger case, and the team had no authority to pursue it further. The CI/CSIT was breaking new ground in the CF; though at times we tended to rock the boat we did not want to sink it.

The greatest stress related to primitive conflicts as basic as survival; anxiety and fear of death, pain or mutilation. This has been noted by all allies (Combat Stress Reaction and Battle Fatigue). Individuals were professionals who were committed to their roles and responsibilities, and could overcome this through the universal time honoured tradition of the regimental and buddy system. In a war-time scenario individuals were less preoccupied with long term political implications of the conflict. One's peers or unit became their support and they did not want to let down their buddies or be disgraced in front of their comrades. Other conflicts revolved around the well-being of the family. Though the unit took on the role of surrogate family, the task at hand could not be enthusiastically embraced without the knowledge that one's loved ones back home were being cared for. Many Canadian bases and units established for the first time a family support network. It cannot be overemphasized that the majority of soldiers in today's forces are well educated, professional, and much more family oriented than previous generations. Both they and their families have higher expectations, including a sense of entitlement. They place the family in high regard; we heard repeatedly that family comes first, ahead of the military, something unheard of a generation ago, and the military must respond accordingly.

Another prevalent emotion was nostalgia, "A sentimental memory of/or longing for things of the past." Nostalgia was rampant throughout the American

178

Civil war and is universal to all wars. Memories are romanticized, idealized, and intensified. A pervasive ache for loved ones and common everyday events once thought mundane become persistent. At times it was bittersweet, at others agonizing, and for a few overwhelming. Did CNN, videotapes and frequent phone calls home alleviate or intensify this? Mail though was almost always positive and uplifting, except for the all too prevalent "Dear John or Jane" letters.

Consistent with the literature and the experience of our allies, many of the psychological difficulties encountered were associated with support troupes (Jones, 1986). Front line operational units had well defined tactical roles, been on numerous exercises practicing for various scenarios, and were able to "plug into" the theatre of operation and carry on with little difficulty. Many smaller units though, especially support troupes, were drawn from various bases rather than a specific unit, and thrown together. Many had not had adequate training, and most had never, ever expected to be at war. Some units orientated and integrated these individuals providing them with sponsors and support while others let them fend for themselves. They often lacked unit identity and cohesion, which decreased their stress tolerance. Also, they had not worked before with most of their supervisors, and when difficulties developed, perceived their supervisors were interested only in their own career advancement.

There was a contrast between units that had access freely to alcohol and did not. The modern professional soldier with high-tech equipment and weapons performed more consistently, and remained healthier in an alcohol-free environment. Individuals were mutually supportive, their milieu normalizing, without the false bravado, disinhibition or other behaviour, especially in mixed gender units, that affects individual and unit morale. People relied more on each other in a respectful, altruistic fashion, displaying healthier ways of coping and interacting.

Morale and esprit de corps appeared higher in units with self contained living arrangements, than those scattered about in hotels. Yet individuals appreciated and respected commanders that obtained the best accommodations and perks for their personnel. It was difficult to determine which arrangements were optimal, though in hotels and apartments individuals tended to isolate themselves, affecting unit identity and cohesion.

The First Canadian Field Hospital located in northern Saudi Arabia was blistered onto the 32nd UK Field Hospital. The British had psychiatric teams and evacuation routes distinct from the medical chain with combat stress/battleshock casualties treated by Forward Psychiatric Teams/Battleshock Recovery Units (FRT/BRU). The closest FRT/BRU to 32nd UK Fd Hosp/1st Cdn Fd Hosp was 80 kilometers away attached to a non medical logistical support unit. They in turn received combat stress/psychological casualties from a psychiatric team at the front and also from a local catchment area. Patients were labelled "clients" to avoid the sick role, and every attempt was made to keep them out of the medical net.

I served as liaison to the BRU and was given the role of "gatekeeper" to assure that any combat stress or psychiatric casualties that presented themselves to the field hospital were laterally evacuated, by logistical and non-medical transport, to the 61st FRT/BRU. It was difficult to arrange transport though when it was needed the most (e.g., following an influx of casualties, including battleshock cases), because this was at the very time the

179

hospital was overextended and dealing with WIA, not having the staff or transport to spare. At another time the phone lines were down for days and transport could not be arranged and a few "clients" were then evacuated medically rearward as there was often pressure to clear out the field hospital in anticipation of incoming.

My initial experience was that the BRU would be more effective if colocated with a field hospital though autonomous and free standing. The field hospital attracted a number of psychiatric and combat stress casualties, and 10%, if not more, of wounded in action become CSC. Many WIA would benefit from combat/critical incident stress debriefing, especially in a brief, intense war. In reflecting upon my experience, I recall that patients did become medicalized, and were quite adamant that they were not going back to the front, but rather "heading south." This supported the view that stress casualties should be kept away from medical facilities. Administratively and logistically, however, it is difficult to implement an assessment and evacuation chain so similar to, yet so separate from the medical one.

The field hospital treated mainly POWs. No one remained neutral about them; POWs provided a direct window to one's soul, stirring strong emotions and reactions. If one's view of the world was as a kind, gentle place, the POWs were seen as victims of Saddam, soldiers doing their job, "just like us," and harmless. If one's personal world was a dark, hostile and dangerous place so then were the POWs, who were perceived as ruthless individuals who would, at first opportunity, torture and kill. The staff's humanity and kindness towards the vanquished surfaced as did in others frustration, anger, resentment and rage. The attitudes towards POWs were also greatly affected by rumor. For days during the ground war we believed, having heard from a "reliable source", that five U.S. hospital based medical personnel including physicians had been mortally wounded by a POW who was inadequately searched. At another time we learned from a senior U.S. medical officer that a female American soldier held captive by Iraqis had been found mutilated, decapitated, and had been sexually assaulted. We learned eventually that both rumors were false, but they had a profound effect on one's attitude towards POWs and the reactions of self and staff had to be monitored and checked accordingly.

While visiting a POW camp I met an Iraqi psychiatrist, a POW himself, who had been a general duty medical officer in the Iraqi army. He related that combat stress was not recognized in the Iraqi military and antiquated terms such as shellshock were still employed, not out of medical ignorance, but for political expediency. The rate was high, both in the Iraq-Persia war and the Gulf war, and forced soldiers to exaggerate minor physical ailments, to somatize, and to malinger.

The emotional well being of servicemembers was contingent on many factors and fluctuated daily. Many had reserves but at vulnerable low points psychological or physiological insults could be damaging. Individuals are just now beginning to come forward with problems secondary to the prolonged stress of war. Their presentation is associated with a macabre perception that they were not going to survive the war. Their tour was one long adrenalin rush, anticipating death at every turn. They have become numbed, isolate themselves, are bored with "routine" and not surprisingly, have had an unsatisfactory family reunion. For some it was the spouses at home who expected the worst with every phone call, and are yet to recuperate from that pervasive anxiety.

The CI/CSIT was in a unique position to monitor and respond to operational and/or combat stress in a war zone. The primary task of the CI/CSIT was proactive and preventive, educating servicemembers at all levels on coping with combat and war related stress and individual patient intervention at Command or individual request, formally or as often informally. Canadian servicemembers did an exemplary job under very taxing circumstances and the Canadian Contingent came through with flying colours. I would humbly state that in terms of combat stress we were more lucky than prepared, as we miraculously had no critical incidents or deaths. We will not be as fortunate next time. The Canadian Forces must implement a comprehensive combat stress management program similar, though on a smaller scale, to the U.S. Army (Management of Stress in Army Operations, 1986; Black, 1988).

REFERENCES

Copp, T., & McAndrew, W.J. (1990). Battle exhaustion soldiers and psychiatrists in the Canadian Army 1939-1945. Montreal: McGill-Queens University Press.

McAndrew, W.J. (1988). Stress casualties: Canadians in Italy 1943-45. Canadian Defence Quarterly, 47-56.

Psychological aspects of desert operations. (1990, August 17). Washington, DC: Division of Neuropsychiatry, Walter Reed Army Institute of Research.

Combat stress reaction and battle fatigue. (Course outline LP 51-400-005 015). Fort Sam Houston, TX. n.d.

Jones, D.R. (1986). U.S. Air Force combat psychiatry. Brooks Air Force Base, TX: USAF School of Aerospace Medicine.

Management of stress in Army operations. (1986). (FM 26-2). Washington, DC: Headquarters, Department of the Army.

Black, E.R. (1988). Human performance in combat. (Working Paper 88-1). St Hubert, Quebec: Mobile Command (Canadian Forces) Headquarters.

OPERATIONS DESERT STORM & COMBAT STRESS: THE U.K. RESPONSE

Morgan O'Connell, M.D.
Royal Naval Hospital Haslar
United Kingdom

1. The Gulf War was successfully prosecuted with fewer than expected casualties. On the U.K. side this amounted to:

Figure 1

Battle dead	26	(from 21 Feb 91)
Non-battle dead	19	(from 13 Nov 90)
Battle wounded	45	

Note.

a. All Missing In Action accounted for.

b. Zero Royal Navy dead.

2. In answer to Parliamentary questions tabled in July 1991, the following figures were given for those servicemen and women still in treatment.

Figure 2

Gulf War 1990/91 Psychiatric Cases

Parliamentary Questions 3943-3-4-5 July 1991 (3942)

Still In Treatment

Royal Navy - 2

Army - 55

Air Force - 22

(3943) Total Numbers Treated

Royal Navy - 25

Army - 400

Air Force - 28

3. In a paper in the Autumn 1991 issue of the <u>Royal United Services Institute</u> <u>for Defense Studies Journal</u>, Sir Kenneth HAYR, Deputy Chief of Defense Staff (Commitments) in writing about logistics in the Gulf War, emphasizes that:

> Logistics can be defined as the science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense it encompasses those aspect of military operations that deal with materials: its design and development, acquisition, storage, movement, distribution, maintenance and evacuation. Logistics also covers the movement, evacuation and medical care of personnel; the acquisition or construction of facilities--and the maintenance, operation and disposition of those facilities.

RESPONSE

4. While the initial mobilization of mental health personnel was relatively small, at the height of the conflict there were a total of 47 personnel allocated to the U.K. Mental Health Teams in a variety of areas.

<u>Figure 3</u>

Gulf War 1990/91 U.K. Mental Health Personnel

Psychiatrists	-	11
Nursing Officers (RMN)	-	10
Other Ranks (RMN)	-	22
Dvr's/Admin	-	<u>4</u>
<u>Total</u>:		<u>47</u>

BACKGROUND TO RESPONSE

<u>Education</u>
5. As a result of experiences gained during the Falklands Conflict and subsequently (1982 onwards), there was a significant awareness on the part of the Royal Navy and Royal Marines to the possibility that military personnel may present with psychological problems in the course of their duties--whether it be in combat or otherwise.

6. This led to the specific formulation of a Defense Council Instruction establishing a SPRINT facility. In parallel with this was the regular presentations on battle shock using a package prepared by the British Army, under the guidance of the Director of Army Psychiatry.

<u>Experience</u>
7. In the case of the Royal Navy, the SPRINT facility was first mobilized in association with the "HERALD OF FREE ENTERPRISE" (Zeebrugge) disaster, then again following on a collision between HMS SOUTHAMPTON" and a tanker in the

Gulf (1988) and in the aftermath of the bombing of the Royal Marine Barracks, Deal (1989).

8. In the aftermath of the Falklands Conflict, and indeed subsequent to the Workshop on Combat Stress in 1984, we began to recognize post-traumatic stress disorder (PTSD) among our own personnel. This led to the development of a treatment program for PTSD and hence the circle of education, response and credibility was complete.

AFTERCARE

9. Having dealt with the immediate need to respond, and conscious of lessons learned in 1982--being in part a reflection of our understanding of PTSD--we were very aware of the need to provide aftercare with a view to early intervention. To this end, leaflets were produced (Appendix I) which were made available to all returning servicemen and women and also to their families.

The Home Front
10. There were regular meetings between the senior psychiatrists of the Army, Navy and Air Force throughout the mobilization phase and during the actual conflict. The initial responsibility for managing the U.K. task in the Gulf rested with the Air Force, and an Air Force Mental Health Team was part of the first significant deployment. The Army was responsible for receiving the casualties on arrival in the U.K., the aim being to use military medical facilities where possible, with the National Health Service on standby once these facilities were taken up.

11. In matters psychiatric it was emphasized that the renewed development and application of the Proximity, Immediacy, Expectancy (PIE) concept in the 80s we were in a position to, with reasonable confidence, state that:

    a. Psychiatric casualties would occur.

    b. When psychiatric casualties did occur they would be recognized sooner, rather than later.

    c. For the most part psychiatric casualties would be treated and returned to duty within the operational area.

    d. Those psychiatric casualties who required more extensive treatment would be referred to Battle Shock Recovery Units in theater.

    e. Only a small percentage of psychiatric casualties would be returned to the U.K.

12. In the United Kingdom, it was emphasized that, for the most part, psychiatric casualties would be contained in the community rather than in the hospital setting and to this end a Combat Fitness Retraining Unit (CFRTU) was authorized and established. The aim of this unit was to provide more extensive rehabilitation for the servicemen and women of all three services who required more than was available in theater. The emphasis was to be on group work (12 in a group) with a 2-week cycle. All three services were to be involved with therapeutic teams of one psychiatrist and two psychiatric nurses per group. Additional input from chaplains, Physical Training Instructors (PTIs) and small arms instructors was to be included. The maximum capacity was to be 180 at any

one time. The concept of the CFRTU was an extension of the PTSD program which has been running at the Royal Naval Hospital, Haslar, for over 3 years, and, coincidentally mirrors Israeli treatment facilities described elsewhere. As it happened, there was no requirement for the CFRTU to be commissioned but it was felt that a significant principle had been established in the event of future conflicts.

13. Much effort was devoted to counteracting the "hype" in the country at large about the vast number of casualties which would result from war. Matters were not helped by the fact that there appeared to be no clear idea among the military medical minds as to the number of kinds or casualties to be expected-- but then of course, that was not a new phenomenon; witness the plans made for the Second World War and the forecast of vast numbers of Londoners being killed and wounded as a result of bombing (the inhabitants of Dresden may, of course, have a different view of this matter). Reasonable concern was expressed at the prospect of having to deal with biological and chemical casualties. It was emphasized that from the psychiatric point of view, the major tasking for the National Health Service (NHS) would be in association with dealing with physical casualties. To this end it was advised that the role of the mental health teams in the NHS would be:

<u>Figure 4</u>

Gulf War 1990/91: Psychiatric Care:

1. Supporting Staff (Physically Injured).

2. Psychological needs of the injured.

3. Psychological needs of Next-of-Kin or (2).

The team would be principally dealing with the stress resulting from managing physical casualties admitted to its care, with the emphasis on looking after staff and preventing burnout. Where possible, the NHS was advised to keep casualties from the Gulf together, notwithstanding their various diagnoses, i.e., capitalizing on their natural group experiences. The NHS was also advised that in theory, all servicemen would have had lectures on combat stress reactions and would have been given the leaflet (Appendix I) as part of this process.

THE ROYAL NAVAL EXPERIENCE

14. There was a brief flurry of casualties presenting with the onset of the conflict, mainly made up of people who had seen service in 1982 and who had not previously come to our attention. Of interest is the fact that their major concern was not so much about themselves, but about putting their relatives through what they had experienced in 1982--this being particularly a feature of those reporting from ships which had been damaged and/or sunk.

15. A team of one psychiatrist and two psychiatric nurses, one of whom was female, was included in the complement of "RFA ARGUS" (a ship with hospital facilities). Their experience was that they spent as much time dealing with the anxieties of their shipmates as dealing with casualties presenting from the

fleet. During the time on station, 15 psychiatric patients were seen and a further four were dealt with by telephone discussion with their own medical officers. These comprised 15 RN and 4 RFA personnel of whom seven were returned to the U.K. on medical grounds and three were allowed a period of compassionate leave--one of these was subsequently admitted to hospital while in the U.K. The problems dealt with were all related to stress; domestic worries were predominant. It is perhaps worthy of note that the first patient admitted to "RFA ARG..." after the outbreak of war was psychiatric.

16. In the aftermath of war we have experienced a lull, but have already put a casualty, suffering from PTSD as a result of his experiences in the Gulf, through a PTSD program. He is in the final stages of being returned to active flying duties. We continue to be actively engaged in liaising with commanding officers of units involved.

17. In summary, the lessons learned (relearned) in 1982 stood us in good stead before, during, and after the Gulf conflict. Our credibility with the organization reflected our ability to respond to disasters in peace-time as well as in actual war. It would not do to become complacent as the lessons learned are too easily forgotten.

Your experience of combat may have been traumatic and painful but this leaflet will help you to know how others have reacted in similar circumstances. It will also show how you can help normal healing to occur and avoid some pitfalls.

NORMAL FEELINGS AND EMOTIONS YOU MAY EXPERIENCE

You may have some of the following. It is unusual to have all of them:

MEMORIES - reliving combat situations and emotions, remembering lost friends and colleagues. Bad dreams.

DISTRESS - when reminded of events because of media coverage, anniversaries, sounds, smells or sights.

NUMBING - reduced interest in previously significant or pleasurable activities and relationships.

AROUSAL - more irritable and jumpy than usual. Physical signs of tension such as headaches, muscular pains, palpitations, sleep disturbance.

AVOIDANCE - avoiding activities that remind you of traumatic events.

LOSS OF CONTROL - feeling that emotions may get out of control and that you may break down.

ANGER - at whatever happened, at whoever caused it or allowed it to happen.
- at the injustice and senselessness of it all.
- at the shame and indignities.
- at the lack of proper understanding by others and their inefficiencies.
- why me?
- anger directed at innocent individuals such as family.

GUILT - for surviving when others have not.
- regrets for things not done or oppportunities not taken.

SHAME - for having been exposed as helpless, emotional and needing help.
- for not having reacted as one would have wished.

SADNESS - feeling low and weepy.
- for deaths, injuries and losses of every kind.

These feelings are normal for anyone who has been through any traumatic experience such as combat and personal injury. The intensity and number of these feelings may vary from person to person but allowing them to be expressed can prevent further distress.

FAMILY AND SOCIAL RELATIONSHIPS

You may have developed strong bonds with those who shared your combat experiences. You may miss these special relationships when you get home and feel that you cannot share your memories and feelings with your family. They may not be able to understand the particular traumas that you have endured. Your relationships with your loved ones may become strained. You may be more accident prone or increase your intake of alcohol and drugs.

WHAT YOU CAN DO

Express your emotions and show your grief. Do not bottle them up.

Take every opportunity to review your experiences and allow yourself to be a part of a group of people who care. It can be a relief to receive other people's physical and emotional support. Sharing with others who have had similar experiences can help. Do not avoid talking about what happened.

Take time out to sleep, rest, think and be with those important to you.

Facing the reality, by attending funerals and inspecting losses may help you come to terms with the trauma.

Be careful not to use alcohol to excess or use drugs without proper medical supervision.

WHEN TO SEEK HELP

If you feel that your emotions are excessive for you at any time in the future even after many years.

If after a month you feel tense, confused, empty, exhausted, numb or you have to keep active in order not to feel.

If you continue to have bad dreams and poor sleep.

If you have no one with whom to share your feelings and want to do so.

If your relationships seem to be suffering badly, or there are sexual problems.

If you are abusing alcohol or drugs since returning home.

If your work performance suffers.

187

LEADERSHIP AND STRESS TRAINING
IN THE ROYAL NETHERLANDS ARMY

Herman W. de Swart
Royal Military Academy
Section of Social Sciences and Philosophy
Breda, The Netherlands

In the presentation during the seventh workshop in 1989 (De Swart, 1990) I mentioned that the Royal Netherlands Army (RNLA) comprised, about 50,000 servicemen, and that the RNLA-field of operations was Northern Germany. Two veracities; now, one and a half year later, totally invalid. Due to the developments in Eastern Europe and in the former Warsaw Pact, RNLA will be reduced about 30% in the following ten years, the entire Army will be restructured (e.g., more airborne elements), and there will be much more emphasis on the so called out-of-area-operations, as an "immediate" or "rapid reaction force," in wartime conditions as well as in United Nations context, during peacekeeping activities. The Dutch participation in the war in Iraq and afterwards is an example of this. LTC René Jacobs, clinical psychologist, will elaborate on these activities in the second half of the Dutch contribution to this workshop (Jacobs, these proceedings).

In spite of all these changes, or perhaps just due to these changes, there is a strong emphasis on leadership in difficult, stressful situations, and on stress prevention techniques in military training, in RNLA policy. I will elaborate a bit more on these two aspects, leadership and stress prevention in training.

Philosophy of Training/Education in RNLA

In modern training in RNLA there is a strong emphasis on education of values and standards, instead of teaching knowledge and technical skills only; the training is thematic and problem oriented. Leadership qualities, the ability to cope with stress, mental flexibility, and creativity are key elements in training. The accent is on supervising and tutorship, in developing an identity as a soldier, in which moral values and goals are a main principle (De Swart, in press).

With this goal in view, the so called "list 5/30" was developed as a guideline for all officer and NCO training courses. The list is an inventory of five essential leadership characteristics or skills: (1) planning, (2) execution, (3) evaluation of actions, (4) communicative skills and (5) social skills; and 30 "steps," essential ways of behavior to attain these. The 5/30 list is not a goal in itself, but is integrated in all "normal" military training. In that way hopefully it becomes "second nature" to all military commanders, an "automatic checklist" in leadership behavior.

In this training program, getting to know and experiencing stress is a very important item; for two reasons. Experiencing stressful situations and learning to cope during training prepares military students for later, truly stressful situations, as a result of which their own behavior as a leader improves (e.g., in decision making under stress, and in showing better modelling behavior). In addition they get to know what stress is and what the consequences may be, if, in future, they have to order their subordinates into dangerous circumstances (COKL, 1988).

With the intention of implementing this aspect in the training and education of regular soldiers (both officers and NCOs) more explicitly, the curriculum of so called <u>grensverleggende activiteiten</u> (hereafter referred to as "GA") has been developed. Literally translated this is "activities to pass mental boarder" or "mind broadening activities" and it can be compared with the philosophy of "high risk, high stress training" as applied in U.S. Army, for example, and surveyed in detail by TRADOC (1989).

<u>"Grensverleggende Activiteiten"</u>

In the GA-training curriculum the Chief of Army Staff has chosen three different activities: (a) parachuting, (b) scuba diving, and (c) mountaineering. The parachuting program consists of 4 days of ground training and, at least 3 static line jumps from an aeroplane. Scuba diving is taught for one week in a swimming pool and is rounded off with at least three openwater dives at sea. The water in the Netherlands is normally cold and underwater visibility is very poor, so scuba diving is stressful, at least the first time, unlike diving in Florida or the Bahama's where it isn't stressful at all. The mountaineering program is run in one week on the high and steep rock faces in the Belgian Ardennes or the German Eifel mountains. Although participation is compulsory, the students can normally choose from among these three activities. If the program has been successfully completed, participants are decorated, and a they can wear a badge, like the para-wing, on their uniform.

As GA is aimed at developing coping skills and leadership behavior, it is essential to evaluate experienced emotions. During the first jump or dive, for example, trainees have to observe their own emotions. Later on during the training, an assignment is given to observe behavior of buddies and/or commanders. An evaluation is carried out, in small groups, immediately, when all participants are on the ground, or out of the water. The evaluation is led by the group's <u>own</u> instructor. It is an activity strictly separated from the technical and procedural evaluation, and implies an unusual "mental" involvement of military instructors. This, however, is very well accepted, by trainees as well as by instructors (Van Sprang 1989, De Waard, 1991).

RESEARCH

Validation of curricula and special training methods is (or at least ought to be) standard procedure. In military training, this is always a difficult job, since the only real validation can be done during battle. Therefore we have chosen another, more fundamental approach. Since GA is intended to improve coping repertoire and leadership behavior, we try to measure changes, caused by GA, in these two aspects. Several methods are available.

In our long range research program we now use: (a) an inventory of subjective experience, (b) the "ways of coping" questionnaire by Folkman & Lazarus, (c) the "wheel" questionnaire by Shalit, and (d) physiological measurements: (1) a reaction time task during GA (dual task paradigm), (2) a pCO_2 (carbon dioxide pressure during exhalation, and (3) heart rate variability (IBI--inter beat interval and spectral analysis of heart rate).

I won't go into detail explaining these different measurement techniques in this paper. I will just outline the main principles and give some preliminary results. Since the research program is not finished and the larger

part of the analyses still have to be done, final results are not yet available.

In a complex design, we compare the effects of the different types of GA through measurements before and after the activities, in control groups, and through comparisons between the effects of the different types of GA. Some of our subjects participate in more than one GA, so a more or less longitudinal impression can be obtained. The subjects are all regular officer- or NCO-candidates.

(PRELIMINARY) RESULTS

Inventory of Subjective Experience (Van der Ven, 1991)
This is a simple 15-item survey asking the subjects in this study--a group of 145 that participated in more than one OA--if they thought GA would be useful in their careers as leaders (in this case as NCOs), and which of the three types of GA (diving, parachuting or mountaineering) they believed to be the most useful. The overall results show that the students are rather positive about the outcome of the training. They state for example that they have learned "to cope" with stress and consider the GA as important in their training. The most significant finding, however, is that mountaineering scores highest on all items. In fact, that is not surprising, since mountaineering gives ample opportunity to assess one's own and one's buddy's emotions during the activity, compared to diving and parachuting.

The Ways of Coping Questionnaire (Folkman & Lazarus, 1988) (Dutch version)
This questionnaire has been developed to provide researchers with a theoretically derived set of measures to explore the role of coping in the relation between stress and adaptational outcomes. The authors describe, on the basis of their well accepted theory of stress, appraisal and coping, combined with a factor analysis on their data, eight different coping scales, read types of coping. Analysis of the Dutch version of the questionnaire (by Inge Bramsen of the Psychotrauma Unit of Leyden University) provided six coping scales: (a) problem solving, (b) seeking social support, (c) await or avoid, (d) wishful thinking, (e) positive reappraisal, and (f) introspection. These six types of coping slightly differ from the original ones listed by Folkman and Lazarus.

A preliminary analysis of the data of 80 subjects show no very large changes in the coping repertoire before and after different types of GA. The scores on "passive coping" items however (await or avoid, wishful thinking) decrease after all GA, compared to initial measurements, compensated for a small part by an increase in "positive reappraisal" (Gouman, 1991).

The Wheel Questionnaire by Shalit (Shalit, 1988, Lav, 1989)
This is an instrument (Figure 1) that maps perceptions of a given situation, and enables the analysis of this perception in terms of the appraisal process, thus obtaining a measurement of the effectiveness of the appraisal and thus the "degree" and type of coping. The questionnaire combines the advantages of a structured query sheet and an open interview; since there are no fixed item categories--the subject can "invent" the contents of the items himself--the researcher gets all kinds of information, even unsolicited; but the data are ranked on a numerical scale and can therefore be processed by a computer. So, in contrast to an oral interview, the questionnaire can be presented to all numbers of a large group at the same time, can be evaluated by

a computer, and will still give information in a way comparable to interviews. Subjects are asked to write down on this "wheel" those factors that they think characteristic or most typical of the situation. They are allowed to give as many factors as they wish (maximum 12), one factor in each segment of the Wheel. Then they are asked to list the factors in order of importance. Ties are allowed. Next they have to evaluate the factors from negative to positive, on a 5-point scale. Lastly, they are asked to assess how much (or little) influence they had over each factor (on a 3-point scale). After analysis of the verbal contents four indices of appraisal can be calculated: (a) structure, (b) coping index, (c) emotional balance, and (d) motivation. These indices can also be compared before and after a stressful experience. In our current study, we have only superficial results to date. These indicate, however, that nearly all subjects indeed experience GA as "high risk, high stress," and (again) that mountaineering seems to be the most useful activity (Gouman, 1991).

Physiological Measurements

This type of research is done in cooperation with the Institute for Perception of the National Institute for Applied Scientific Research (IZF/TNO). Since heart rate variability (interbeat interval of IBI as well as the so called 0.1 Hertz component of heart rate spectrum) is a very good predictor of mental pressure or stress, with psychophysiological methods these factors can be, assessed before, during and after stressful training, and in control conditions. A pilot study with military scuba divers showed very clearly the effects of stressors on heart rate indices. We used environmental stressors, like perceived depth, but also a mental task during the dive. A waterproof device is used in the diving experiment. In it are registered, during a dive, heart rate as well as breathing parameters. It also contains a tape recorder (a computer based system is being developed now) to give audio signals to a headset the diver has. These signals act as stimuli in the dual task; they can be a reaction time task as well as a memory task, or both.

In Figure 2 the effect of mental stress on heart rate variability as expressed in the height of the 0.1 Hertz peak (or blood pressure component) in the cardiac frequency is shown. The first graph shows a well adapted diver with a very high 0.1 Hertz peak; the second graph is obtained from a diver who didn't complete the training--one can very well note the missing 0.1 Hertz peak (Jorna, 1982). A high correlation was found between a "coping rank order" and scores on some "paper and pencil" psychological tests (De Swart, 1985). A more elaborate study is prepared now (with more subjects and more measurements). In that study we will also apply measurements of carbon dioxide pressure during exhalation as an index of the stress experienced. This index is based on what is called the pre-hyperventilation (Wientjes and Kostermans, in press). Figure 3 stems from an exploratory study during parachutist training: one can very clearly notice the high peaks in the heart rate (from a normal 60 beats per minute to 169!) at important moments during the drill in the airplane and immediately before the soldier lands (De Waard, 1991).

CONCLUDING REMARKS

In conclusion I think this more or less interdisciplinary approach (questionnaires from personality theory and clinical psychology, assessment methods from psychophysiology and experimental psychology, leadership assessment from social psychology) is a labour-intensive, but necessary and fruitful way to validate a complex concept as GA in the perspective of stress and leadership.

REFERENCES

De Swart, H.W. (1985). Vragenlijsten als voorspellers van stress bij duikers. Doc.nr. 85-11, Directie Personeel Koninklijke Landmacht, 's-Gravenhage.

De Swart, H.W. (1990). Stress and stressmanagement in the Royal Netherlands Army: Planning, organization, training. In A.D. Mangelsdorff (Ed.), Proceedings Seventh Users' Stress Workshop, San Antonio, Texas, 1989.

De Swart, H.W. (in press). An inventory of activities aimed at improvement of psychological support in the Royal Netherlands Army. In D. Wiegand (Ed.), Report by NATO Research Study Group 22 on Psychological Support for Military Personnel, Volume I.

De Waard, C.A.J. (1991). Opzet grensverleggende activiteiten. Koninklijke Militaire Academie, Breda (intern rapport 110991).

Folkman, S., & Lazarus, R.S. (1988). Ways of coping questionnaire. Consulting Psychologist Press, Palo Alto.

Gouman, G.J. (1991). Grensverleggende activiteiten en het verleggen van grenzen. Koninklijke Militaire Academie, Breda.

Jorna, P.G.A.M. (1984). Heart-rate parameters and the coping process underwater. In J. F. Orlebeke, G. Mulder, L. J. P. Van Doornen (Eds.), Psychophysiology of cardiovascular control: methods, models and data. Plenum Press, New York.

Lay, F.A. (1989). De Wheel Questionnaire en het bepalen van stress. Doc.nr. 89-10, Directie Personeel Koninklijke Landmacht, 's-Gravenhage.

COKL. (1988). Leiderschapsgedrag COKL. Brief C-COKL nr 47.494/1 dd. 280988.

Shalit, B. (1988). The psychology of conflict and combat. Praeger, New York.

TRADOC. (1989). High risk/high stress training special study final report.

Van der Ven, G.A.W. (1991). Enquete Grensverleggende Activiteiten. Koninklijke Militaire School, Weert (intern rapport 120691 en 230791).

Van Sprang, M.C.L. (1989). Stress bij parachutisten. Doc.nr. 89-09, Directie Personeel Koninklijke Landmacht, 's-Gravenhage.

Wientjes, C.J.E., & Kostermans, M.T.E.M. (in press) Stress en ademhaling bij duikers: de effecten van een duikmasker op de ademhaling Report IZF/TNO.

Figure 1
The Wheel Questionnaire (from Shalit, 1988)
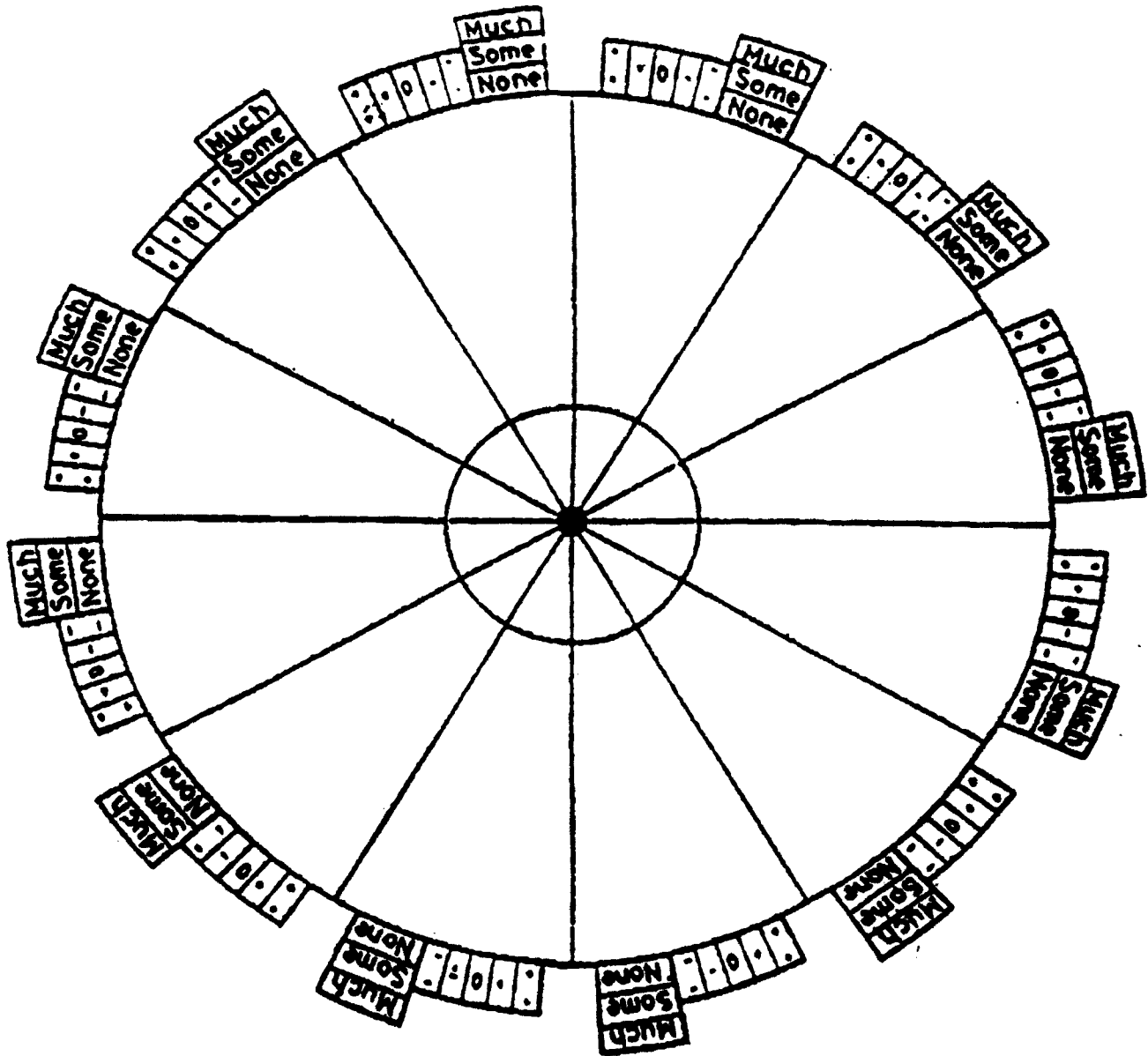
Figure 1
The Wheel Questionnaire (from Shalit, 1988)

Figure 2
Heart rate variability, two subjects (from Jorna, 1984)
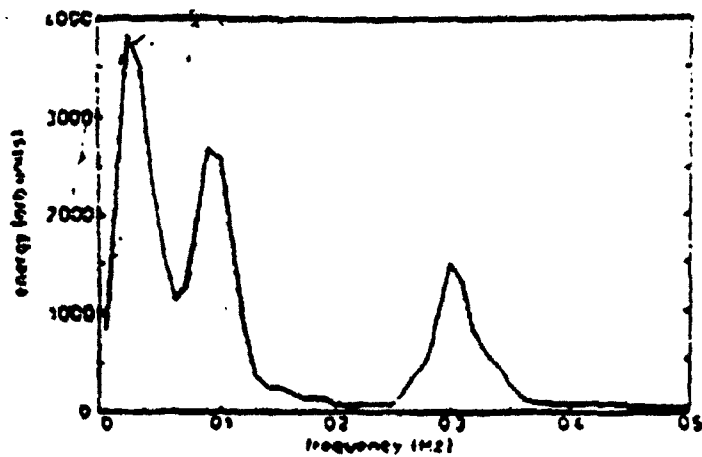
Spectrum for cardiac intervals obtained from a swimming diver at a
depth of five meters. Three components can be identified: at 0.02 Hz,
0.10 Hz and 0.30 Hz
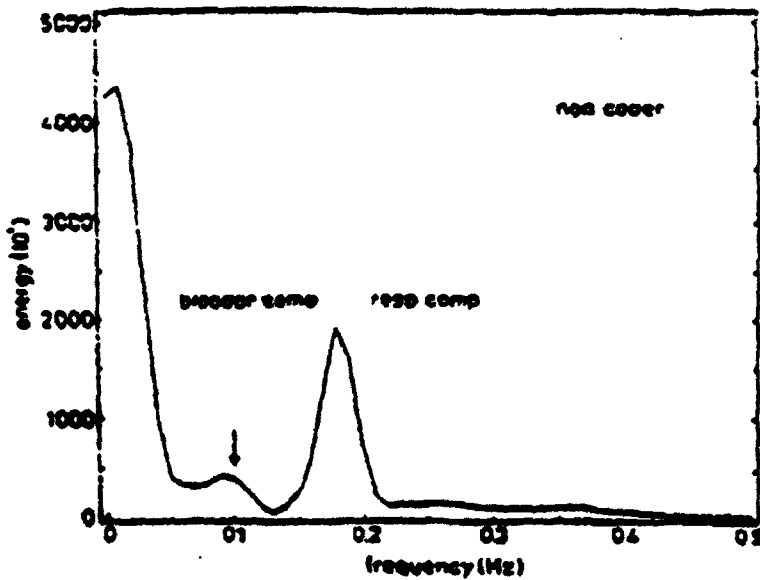
Spectrum for cardiac intervals obtained from a swimming diver
halfway training who did not complete the training course. Note
the persisting decreased bloodpressure component and the low
breathing frequency (energy expressed in $sec^2 \times 10^{-6}$).

Figure 2
Heart rate variability, two subjects (from Jorna, 1984)

Figure 3
Heart rate during parachutist training (from De Waard, 1991)
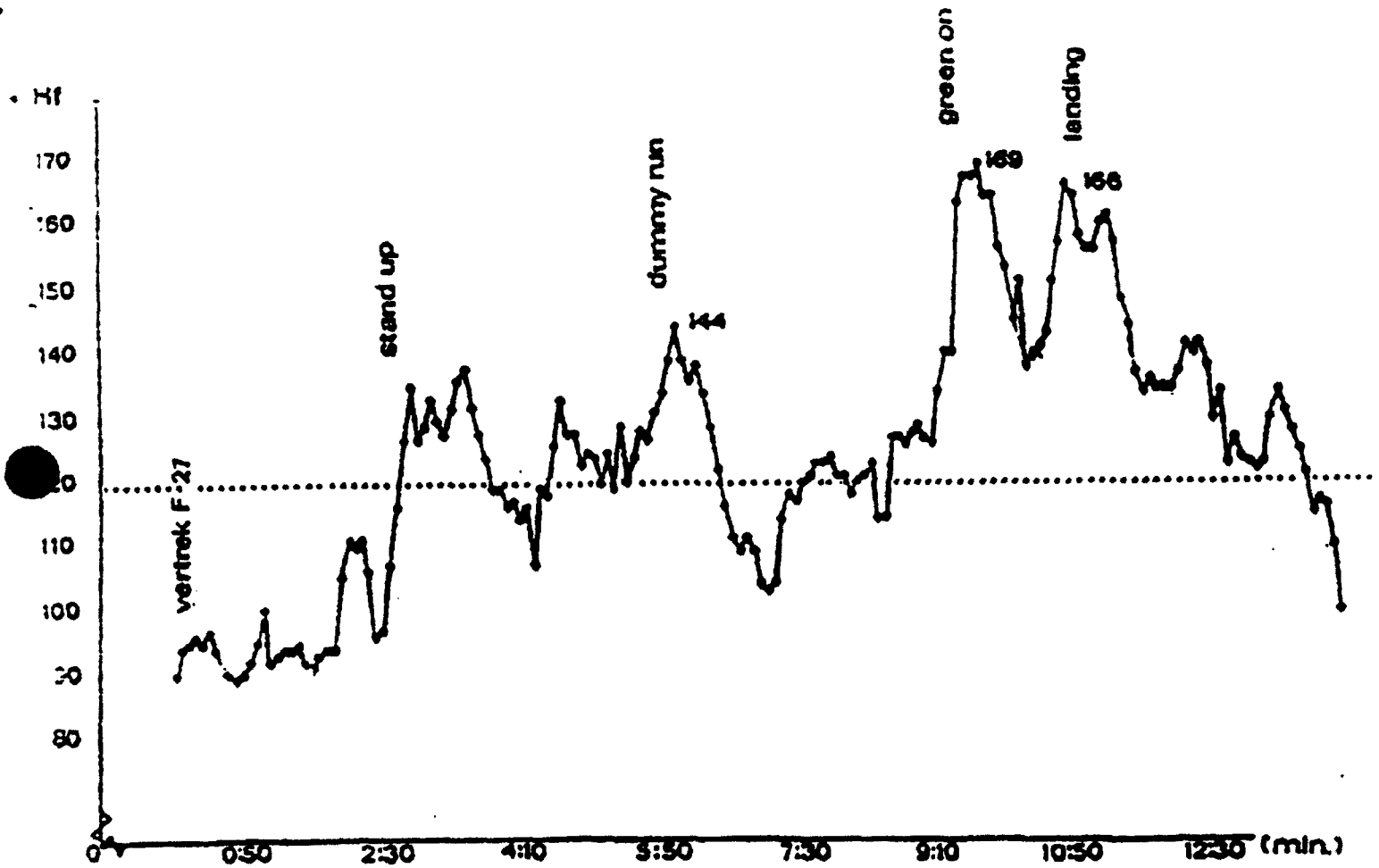
Figure 3
Heart rate during parachutist training (from De Waard, 1991)

PROVIDE COMFORT: OBSERVATIONS AND ACTIONS

Rene W. Jacobs
Directie Personeel Koninklijke Landmacht
Sectie Individuele Hulpverlening,
Royal Netherlands Army
The Netherlands

For the first time in the history of the Royal Netherlands Army (RNLA) a psychologist was sent along together with the troops to an area of possible violence. The reason that this happened was that slowly but surely the Army Board had come to the conviction that psychological help was efficient in the prevention and curation of combat stress reactions (CSR) and PTSD. And, my colleagues and I, as clinical psychologists, were convinced that if I acted in line with the findings of Salmon (immediacy, proximity, expectancy, simplicity and uniformity), I could be successful in giving help to our troops.

As you have heard from my colleague Lt. Col. De Swart there is a training-program for a part of our military personnel. But, it is mostly for our younger officers and NCOs. And, it still has to be started for the conscripts who make up the greatest part of our Army.

In May and in the beginning of June, 400 Marines and about 600 Army soldiers were sent to the northern part of Iraq in order to assist the allied troops in their action of bringing relief to the Kurds. My efforts were mostly directed at the men and women of the 11th Engineering and Rescue Battalion, which existed of about 400 engineers and 200 medics (low-care).

GROUP TRAINING

Two days before the first group was sent on their way I volunteered the battalion and, with a colleague, I started a comprehensive prevention program. It consisted of a short introduction to the situation in Iraq and the possible confrontations our people could meet there:

- With respect to the situation they were informed about geographical, political, and religious aspects. They got a booklet about these items which they could read when they were on their way to Turkey.

- Hygienic aspects were illustrated by an expert who really knew how to bring a message.

The psychological aspects we informed them of were partly warnings about what could possibly happen to them, what traumatic events they could meet and what impact these could have on their feelings and behavior. A few examples:

- The refugees are in despair and in great need of basic facilities so they will possibly be aggressive towards you, and you should not expect gratitude from them.

- A lot of them are ill and wounded or dehydrated, so you will be shocked when you see them.

- There will be a lot of uncertainty with regard to your own position. We don't know how long we will stay there.

- And contact with your relatives will be infrequent and nearly always only by mail.

- We have no idea about the reactions of the Iraqi forces.

Under these conditions, you engineers will have to build a camp and keep it running and you medics have to take care of the sick and the wounded. This all will mean a great deal to you! This will stress even you! And you will feel anxious; you will feel guilty; you will feel angry; you will feel helpless; and you will feel grief. And, you will be warned by your body by experiencing heartbeats, inexplicable sweating, agitation, exhaustion, irritation, restlessness and other signs for which you don't have an explanation. Look after yourself and your buddy. Watch for these symptoms. They can be the first signs of stress!

As we realized ourselves these "preventive measures" were shortcuts and could not replace a good training program. So we decided to give slogans for the most important topics:

1. All these are normal reactions in an abnormal situation.

2. You have to take care of yourselves if you want to be able to take care of others.

3. Talk about your emotions, don't keep them inside.

As is well known, talking about emotions goes well if you have someone around you can trust. And luckily, military institutions insist on working in teams and in a team it is not hard to find a buddy.

ACTIVITIES: LEARNING TO TALK ABOUT EMOTIONS

In order to help, I planned to accompany all the teams as they worked on location. Also, by doing this, I would be able to find out which teams were the most vulnerable and make the team-members get used to talking to each other about emotional experiences as their shifts were over. As I was alone, I looked for assistance, and I got it from the chaplain and the vicar. After a few days, it became clear that most of our attention should be directed at the medics, as they met the most impressive situations during their work. And, we succeeded in introducing a habit of talking about emotional experiences that was followed by all the teams. As far as we could find out everybody had found a buddy to talk to. Later, back in Holland, we noticed that this talking to each other and the slogans we had given them must have made a great impression on most of them, for as they were interviewed by local newspapers these were the things that were mentioned.

TESTS

As all had gone in a hurry I had not been able to test anyone before our departure to Iraq, but I was able to do so as we were in there. By means of three personality tests, I wanted to assess the influence of the stay in Iraq. I selected at random 100 volunteers from the battalion and 25 from the Marines.

197

Everybody got three questionnaires to fill out:

(1) The Nederlandse Persoonlijkheids Vragenlijst (NPV) a personality questionnaire that is related to California Psychological Inventory (Gough, 1975). The NPV exists of 7 subscales which examine personality traits as: (a) inadequacy, (b) social inadequacy, (c) dominancy, (d) injuredness, (e) rigidity, and (f) self-sufficiency.

(2) The Symptom Checklist (SCL) '90 which is a list of possible complaints people have and which are related with pathology. It is based on self-judgement of the examined. It is a translation of the self-rating scale by Derogatis et al. (1977) and measures states (e.g., agoraphobia, depression, inadequacy, hostility, sleeping problems, somatic complaints, anxiety, sensitivity).

(3) The Utrechtse Coping Lijst (UCL) which is meant to assess the way people cope with (stressful) life-events. It goes back to the classification of coping behavior by Westbrook (1979) and measures states as: (a) depression, (b) activity, (c) expression of emotion, (d) avoidance, (e) looking for support, and (f) palliative reaction.

Analysis of this small sample showed that there were 122 valid cases. Among the respondents there were 18 persons with deviant scores on the subscales. Thirteen of them with only one deviation and these were mostly on the following three subscales of the SCL '90:

- agoraphobia   (3)
- hostility   (4)
- sleeping problems (3)

Five of the respondents had more than one deviant score with a maximum of four and these were made for more than 90% on the SCL '90 and one on the NPV. But these results were so widely spread that I couldn't make any pronouncement about possible causes. None of the deviant respondents has yet asked my office for help. Searching for relations and possible explanations, I found that the only striking things were the fact that most of the deviant respondents were enlisted men from the engineers construction company and in general had only a lower school education (see Tables 1, 2 and 3).

THERAPEUTIC INTERVENTIONS

I gave psychological support to nine males and three females and among them were three persons who had brought along their problems from home to Iraq. If there had been time for a selection procedure I am sure they would have been kept in Holland. There were also two group interventions, one of them because of a complete false communication between the group members, the other because of dissatisfying labour conditions. One of the interventions was successful by bringing the group members together from their widespread locations and having each person tell his view of the situation and having the others listen, ask for more details, and then tell what should improve the situation and what he would contribute to it. During the sessions of the second group, two of the members and I became ill, and a few days later we were all preparing to go back to Holland.

Nearly 3 months later, fitting in with the after-care, I sent a letter to all the men and women of the battalion. In this letter I told them that from my professional point of view the whole operation had been successful. But that I could imagine that some of us had noticed some changes in our behavior or emotions for which there was no plausible explanation. I asked them to contact me if they had such experiences. Two did.

CONCLUSIONS

As there were only 12 therapeutic contacts during our stay in northern Iraq and there were only two persons who had asked for help after a period of 3 months, I think I can say that the period we were in was a success from a psychologist's point of view. The results of the tests confirm this statement. I surely do not mean to say that this was due solely to our activity; on the other hand, I am certain that our work positively contributed to it.

TABLE 1

Table 1: frequency of deviant respondents related to company

Company	Frequency	Percentage
Staff	2	11.1
Medics	1	5.6
Engineers	10	55.6
Specs	4	22.2
Marines	1	5.6
Total	18	100.0

TABLE 2

Table 2: frequency of deviant respondents related to status

Status	Frequency	Percentage
Enlisted	11	61.1
Prof	7	38.9
Total	18	100.0

TABLE 3

Table 3: frequency of deviant respondents related to schooleducation

Education	Frequency	Percentage
Low	3	17
Mean	9	51
High	4	22
Missing	2	10
Total	18	100.0

Low = < high school

Mean = high school or equivalent

High = university or equivalent

NATIONAL ORGANIZATION FOR VICTIMS ASSISTANCE (NOVA):
A HANDBOOK FOR COPING WITH THE IRAQ/KUWAIT CRISIS

John H. Stein, J.D.
Marlene A. Young, Ph.D., J.D.
National Organization for Victims Assistance
Washington, D.C.

SUGGESTIONS FOR HELPERS

Who are the helpers? For many family members, the people they will first seek out are their clergy--men and women whose training and experience in pastoral counseling may never have prepared them for this situation.

Some family members will seek out one or more relatives or friends to play this role. Sometimes, it is not a close friend the family members turn to but a person they instinctively think is a gentle and caring listener.

Some will seek out professional counselors and therapists--for themselves or for their children or other loved ones who are having a hard time.

NOVA is also offering to try to link up family members with a victim advocate, if one can be found in their community. They only need to call us at (202) 232-6682 and we try to make that referral. Let us explain why we believe many of the trained staff and volunteers of America's 6,000 victim assistance programs may prove to be helpful.

First, hostage-taking is, after all, a crime, and many kinds of hostage-taking of Americans overseas are violations of our Federal criminal laws. Whether or not the detentions in Kuwait and Iraq are violations of those Federal laws, we know that many victim advocates are prepared to treat them as crimes, and will offer family members the same free services that they give to others in their communities.

And second, these are professionals who deal daily with the stress and crises of people who have been violated.

Some victim advocates, like other "natural" and professional helpers family members seek out, will feel comfortable in the counseling role, but a great many will have doubts about how to be most helpful. Even victim advocates, with all their experience, usually have little experience in helping people who are stuck right in the middle of their crisis.

We hope that some of the following suggestions will help family members and their helpers construct a private, confidential relationship that eases the pain of waiting. Our suggestions are directed to the helpers:

--Try to let the people you're working with talk when they want to.

--Accept all feeling and reactions. All are valid, and normal, and natural, and that includes their most intense feelings. If the family member's rage, or hatred, or terror makes you uncomfortable, remember that these are feelings and fantasies, not deeds. Remember too that the family members have a right to say what's in their hearts--they did not choose to put those harsh

feelings there. And, if forgiveness is part of your own value system or theology, our gentle suggestion is to save your sermons for sometime after the crisis is over.

--Don't betray confidentiality.

--Make periodic visits to those waiting for loved ones--but call first. The unexpected sound of a doorbell can be upsetting.

--You don't have to force conversation--"How are you doing," is often enough. Be prepared to listen at any time and provide opportunities for talk. Be prepared for quiet visits when there is little conversation. Don't be afraid of the silences.

--Ask if you can get information for loved ones on problems they are facing.

--Help with practical issues such as mowing the lawn, bringing some food, offering to help with children on a specific date, transportation, etc. But offer to do specific things--don't just say, "Call me if you want help with anything."

--Don't insist on doing things when a person says no.

--Send supportive notes, or relevant cartoons (humor is a favorite way to ease the strain for many family members), or other things that say, "I thought of you when I came across this."

--Discuss important dates, events, or traditions and how they might be handled.

--Create special tributes at difficult times.

--Be prepared to hear about big, practical problems--like the possibility that the family has just lost its complete source of income, or that, in staying in touch with family and friends around the country, they have run up huge telephone bills. You may be in no position to help--but maybe you can become an imaginative finder of someone who is.

--Offer to be a sounding board as the family member tries to plan his or her coping strategy. Help the individual think through what worked well in past crises, and what is working in this one. Help think up new options. But again, don't force yourself: if a person is down, and not wanting to think or plan, respect those feelings. Remember that depression is itself a coping method that serves us well, at least in moderate doses.

--Some family members may want to press their views about how to resolve the crisis on the government and the media. We who are victim advocates are familiar with that kind of activism--in fact, one reason we call ourselves "advocates" is that we believe that crime victims have a right to have their views considered by decision-makers and have their legitimate needs answered by public and nonprofit agencies. But we believe that the advocate's role should be limited to trying to help a whole group of victims with differing opinions they want to express. As we see it, our job is not to endorse any one viewpoint, which would have the effect of closing our doors to family members

204

who disagreed with that position. Instead, we believe that the views of all family members deserve to be considered, and so we work to keep open all the relevant channels of communication. Other helpers may want to adopt a similar approach to advocacy during the current hostage crisis.

--Many family members will become news addicts, for obvious reasons. Some will want to find other "experts" on the crisis, and you can help them find them--in magazines and books, and in other places too. There is, for many, "expertise" in music, and poetry, and sacred texts. The passages that follow are just two that victims have brought to us. The first is the lyrics of a song of hope, written by Eric and Paul Jacobsen while their father was still held captive in Beirut. The second is a theologian's reflections on grief over the absence of a loved one. Clearly, the "absence" he meant was because the loved one had died--but it may also prescribe, or describe, a way of coping for some hostage families.

"When the Word Comes"

Never let go, deep in your soul
Hold onto a single prayer.
God only knows freedom's so close
The innocent can be spared,
And the constant fears of the days that have turned to years
Will suddenly disappear

When the word comes,
Their freedom won,
They'll already be bound home safe and sound.
When the word comes
And we'll be done
Waiting and praying for the day when the word finally comes.

Spotlights, long nights, headlines and false signs
Strike again like lightning.
Old news and no news, the same lines and the slow times,
Are always frightening.
But the worries and the fears of the days that have turned to years
Will finally disappear

When the word comes,
Their freedom won,
They'll already be bound home safe and sound.
When the word comes
And we'll be done
Waiting and praying for the day when the word finally comes.
Bring them home, Bring them safe and sound.

A Theologian's Reflections on the Absence of a Loved One

"Nothing can make up for the absence of someone whom we love, and it would be wrong to try to find a substitute; we must simply hold out and see it through. That sounds very hard at first, but at the same time, it is a great consolation, for the gap, as long as it remains unfilled, preserves the bonds between us. It is nonsense to say that God fills the gap, he does not fill it, but on the contrary, keeps it empty and so helps us to keep alive our former communion with each other, even at the cost of pain."
                                        --Dietrich Bonhoeffer

REACTIONS OF THE ISRAELI PUBLIC TO THE MISSILE ATTACKS OF JANUARY, 1991

Reuven Gal
The Israeli Institute for Military Studies
Zikhron Ya'akov, Israel

What influence did the missile attacks, false alarms, and repeated threats of use of chemical/biological warheads have on the Israelis? How did citizens of different ages and social classes react in such a threatening and unknown situation? What were the principal things that frightened them? What were the major factors that calmed them? Did these reactions change with the passage of time, as the alarms and attacks became repetitive? Was there a difference in the effect of the missiles on citizens residing in areas of high danger as compared to individuals living in safer areas?

These and related questions occupied the researchers of the Israeli Institute for Military Studies (Institute), from the second day of the missile attacks.

In order to provide answers, the researchers developed this survey based on two iterations of a questionnaire to be delivered to members of the general population living in areas of high danger and areas not of high danger (i.e., relatively safer areas).

The goals of the survey were (a) to identify the principal reactions of adult citizens under the emergency conditions of the Gulf War, (b) to evaluate the level of fear reactions of members of the public located in different areas of the country during this situation, and (c) to determine the level of confidence that members of the public had in the security forces and other efforts designed to bring about calm.

METHOD

The questionnaire contained (a) a page of explanatory material; (b) a page for requested demographic data; and (c) the substantive section which pertained to the impact of the Gulf War and included questions on reactions and symptoms, during and after the alerts, questions on coping and functioning, and a request for the respondent's subjective forecast.

The first round of the survey was undertaken after the third night of the alarms. A special page, dealing with the level of fear and functioning experienced on the first and second nights of the alarms, was included in the questionnaire delivered at that time.

The entire sample (both rounds) included 170 subjects, men and women from age 15 to 70. It was comprised of four groups chosen to represent various levels of danger imposed by SCUD missiles. In order of decreasing danger (groups 3 and 4 being equal in that regard), the groups were (a) the Holon Group (residents of the urban neighborhood Tel Giborim in Holon), (b) the Haifa Group (residents of the urban neighborhood Naveh Shaanan in Haifa), (c) the Zikhron-1 Group (individuals who were not permanent residents of Zikhron Ya'akov but who had chosen to move there from the Greater Tel Aviv Metropolitan Area, an area identified as being of high danger), and (d) the Zikhron-2 Group (permanent residents of Zikhron from the neighborhood identified as Naveh

HaBaron). Within each group, those examined were chosen at random, but in such a manner as to allow a resampling.

Although it was the investigators' intent to question the same subjects within each group twice, it proved impossible to locate all of the participants in the first round a second time. Therefore, the second round included those subjects from the first round who could be located <u>and</u> additional subjects (from the same four areas) who had not participated in the first round. See Table 1 (Sample Distribution by Groups and Rounds).

PROCEDURE

The questionnaires were delivered to the subjects in their homes by investigators from the Institute. Round 1 (R-1) was conducted on January 20, 1992, after the third night of missile bombardments; round 2 (R-2) was conducted four days later. The investigators explained that participation was voluntary and that responses would be anonymous. They also explained that they would return and ask that a second questionnaire be filled out. For this reason, each subject was asked to put a serial number at the top of the first page of the questionnaire and to remember it and use it to mark the second questionnaire, so that the first and second response of each subject could be compared.

DIRECT FINDINGS

The responses to the various questions were examined using descriptive statistics; then an analysis was conducted with regard to the interrelationships between the variables.

General Feelings. Reactions. and Symptoms

There were five possible responses to the request to report one's current dominant feeling. Approximately 5% of the respondents in R-1 <u>and</u> R-2 reported that the situation was "deathly frightening"; approximately 32% in both R-1 and R-2 reported the situation was "very frightening"; 10.5% in R-1 and 5.3% in R-2 reported that it was "exciting and stimulating"; and 44% R-1 and 52% R-2 reported that it was "not so terrible."

Quite outstanding differences appeared among the groups. The group of Holon residents stood out as the most frightened group in R-1 (46% of them indicated that they were "very frightened"; while the group of permanent residents of Zikhron Ya'akov were the most calm (65% of them indicated it was "not so terrible). However, during R-2 a marked change occurred: the Haifa residents and those who had left Gush Dan to seek refuge in Zikhron Ya'akov (Group 3) became the most frightened ("40.5% and 42% reported being "very frightened"); whereas, the Holon residents demonstrated relative calmness (65% reported that is was "not so terrible").

In R-1, subjects were asked about their sense of fear after the first, second, and third nights of bombing; in R-2, subjects were asked only about their sense of fear after the first, second, third, and seventh nights.

The fear level (Figure 1) after the first night was quite high (4.6 on a 7-point scale); after the second night it declined to an intermediate level (3.6); but thereafter it remained at approximately that level. Differences are apparent among the groups.

208

Subjects were asked to report their most prevalent symptom of the last 24 hours. Sleeplessness was ranked first (41% to 43%); anger and rage, second (39% to 35%); withdrawal, third (32% to 34%) stomach pains, diarrhea, and related symptoms, fourth (21% to 26%). Panic, paralysis, and weeping were rarely reported.

Subjects were also asked to evaluate the chances that they, personally, would be injured in the war. Only a very small percentage (3.2% in R-1 and 3.9% in R-2) indicated that the chance was "very high"; 5.4% in R-1 and 15.5% in R-2 indicated that the chance was "quite high"; 65.6% in R-1 and 55% in R-2 indicated that the chance was "quite low"; and 25.8% to 25.6% indicated that the chance was "negligible."

It should be noted that in R-2 the percentage of those evaluating their chances of being personally injured as "quite high" increased--5.4 % in R-1 to 15.5% in R-2. This increase was caused primarily by the Zikhron 1 group, whose members had, in fact, taken steps to distance themselves from danger; a smaller, but still significant, increase in risk estimation was demonstrated by the Haifa group.

In both rounds, respondents reported a very high percentage of compliance with instructions regarding donning masks, sealing rooms, etc.--85.4% to 87% complete compliance and 13.3% to 7.9% partial compliance, depending upon the night. No significant differences occurred among groups or nights.

To the question "What went on in your mind?", the majority of the subjects in both rounds (37% and 28%, respectively) answered, "I was worried about the members of my family who were with me." In R-2, concern about family members not with the respondent increased (3% in R-1 to 15.4% in R-2).

When asked about what they most feared, respondents cited uncertainty, chemical attack, and conventional attack in that order--41.3% in R-1 to 51.2% in R-2; 32.6% in R-1 to 21.3% in R-2; and 7.6% in R-1 to 14.2 % in R-2, respectively. Although the dominant factor remained "uncertainty," it is noteworthy that the weight of "conventional attack" as the most frightening factor almost doubled, from 7.6% in R-1 to 14.2% in R-2.

Calming and confidence building factors were also explored. In response to the question, "What is the one thing that most calms you during the tie of a siren warning?" the three most frequently given answers were: radio announcements; the appearance of Brigadier General Nahman Shai, spokesman of the Israeli Defense Forces (IDF); and personal preparedness (i.e., "I have a mask, a sealed room, etc.").

Subjects were also asked about their degree of confidence in the different sources of security. They ranked the IDF highest (about 90% of those asked in the two rounds expressed a very high degree of confidence in the IDF); the spokesman of the IDF next (about 80%) and the Civil Defense and Security Forces third (about 67%). Forty-nine percent of the respondents reported a high degree of confidence in the national leadership.

Regarding the question "To what degree do you rely on the IDF's fighting ability in the event that it is required to intervene in the war?", a majority of respondents (94% in R-1 to 90% in R-2) expressed a high degree of

209

confidence, stating that they would rely to the IDF "to a great degree" or "to a very high degree."

In response to the question, "How do you think the situation will develop?" the two most frequent answers were "The war will continue for a few more weeks without the intervention of Israel (approximately 38% for both rounds) and "I haven't a clue" (26.8% in R-1 and 29.8% in R-2). The passage of time did not have a calming effect; in fact, it increased anxiety.

Relationships Between Variables

An examination of the overall matrix of intercorrelations between the different variables reveals some expected relationships between the variables. Generally, the more frightening the situation was perceived as being and the higher the chance of being personally injured was perceived as being, the higher was the feeling of fear and the frequency of stress symptoms.

Table 2 presents the intercorrelations (Pearson's r) between the main variables: feeling of fear (FF), general feeling (GF), chances of being injured (CHBI), and functioning during alarm (FDA). The upper right triangle presents the intercorrelations in R-1; the lower left triangle presents the intercorrelations in R-2; and the area within the diagonal lines presents the correlations between R-1 and R-2 (i.e., the correlations between repeated measurements of the variables obtained from subjects who participated in both rounds).

The only outstanding difference between the two groups of inter-correlations is that concerning "functioning during the alarm." In R-1, it appeared that there was some relationship between the manner of functioning during the alarm, on the one hand, and the feeling of fear (.18) and the chance of being injured (-.26), on the other. That is, people who were very fearful and who perceived a higher chance of being injured were more conscientious in fulfilling the safety instructions. However, in R-2, this relationship disappeared completely.

The four correlation coefficients appearing within the diagonal in Table 2 reflect the level of similarity between the reactions of the subjects (N+56) who participated in both R-1 and R-2. The highest similarity is with the feeling of fear (r=.72), and the lowest is with the general feeling (r=.31). The overall canonical coefficient between the two series is .79, thus explaining 62% of the variation of the answers in the two rounds.

An analysis of "Repeated Measures - ANOVA" was carried out. The only two dependent variables for which a significant main effect was found with the time factor (the repeated measures) were: (a) the frequency of the symptoms of panic (F=4.26; p .04) and (b) the frequency of the symptoms of anger and rage (F=4.44; p .04). In both cases, a decrease in the frequency of these symptoms occurred from R-1 to R-2. No significant effect was found for the time factor with regard to the remaining variables.

Analysis According to Background Variables

An analysis of the level of fear according to age groups shows a direct relationship; as age increases, the fear level drops.

We next examined the assumption that this relationship between age and fear stemmed, in fact, from another factor--concern for children (i.e., young

210

people often have to take care of young children and the apparent relationship between age and fear might actually be a relationship between parental responsibility and fear). Therefore, a discriminant analysis of age and parenthood was made within each age group.

The tendency for fear to decrease as age increases was preserved; however, it was apparent that parenthood influences the level of fear <u>within</u> each age group. For example, within the 20-30 age group, parents reveal a fear level (4.36) significantly higher than those who are not parents (3.73). However, in a statistical examination (Two-way ANOVA), neither significant effects nor significant interactions were found.

Certain differences were also found with regard to other background variables, such as sex, education, and ethnicity. Although a detailed analysis of responses as related to background variables will be presented in a separate report, some principle findings can be mentioned here.

Those individuals with more education generally reacted with lower levels of fear than those with less education. Females reacted with a higher degree of fear than did men.

A stepwise discriminate analysis was carried out to identify those chronic variables likely to be predictors of the intensity of reactions or symptoms. Only two (tendency to anxiety and holocaust background) had a sufficient distribution to allow a discriminant analysis.

In an analysis by the tendency to anxiety, two distinguishing variables were found: the chances of being injured (F=18.7 p .001) and weeping (F=6.3 p their chance of being injured (canonical correlation 0.22) and also revealed a higher frequency of weeping (.29). In the analysis by holocaust background ("Some of my family were in the holocaust"), two distinguishing variables were found: the feeling of fear (F=13.3 p .001) and confidence in the sealed room (F=6.8 p .01). Individuals who directly or indirectly experienced the holocaust demonstrated a lower level of fear than those who were not connected to the holocaust (canonical correlation .17) and had less confidence in the sealed room (.25).

SUMMARY

From the standpoints of size and statistical representation, this survey is not based on an optimal sample. It was, however, done in real time and it represents populations from three extremely relevant areas.

The picture that emerges is of controlled reactions during the first days of the war; small signs of adaptation, or routinization, were exhibited from the first night and through the first week of alarms. Although most subjects realistically evaluated their chances of being personally injured as quite low to negligible, they nonetheless strictly followed safety instructions during alarms, even after a number of nights of missile strikes.

The most frightening factors were uncertainty and the fear of chemical weapons; the most calming factors were the radio announcements, the IDF's spokesman, and the protection kit itself.

The respondents expressed high confidence in the IDF and its fighting ability, if and when it would be called upon to intervene; however, only a small percentage of respondents believed that Israel should actively intervene in the war.

Levels of fear, as well as the prevalence of various symptoms, were dependent on the way the respondents perceived the situation and their appraisal of their personal chances of being injured. These subjective appraisals apparently also dictated other reactions and coping modalities. In addition, reactions were influenced by objective factors such as age, sex, and parenthood. The level of chronic (personality-determined) anxiety and a background of holocaust experience also significantly influenced levels of fear and ways of coping.

TABLE 1

	Zikhron 1	Zikhron 2	Holon	Haifa	Total
First round (20.1.91)	N=32	N=20	N=24	N=19	N=95
Second round (24.1.91)	N=33 (11)	N=27 (12)	N=34 (21)	N=37 (12)	N=131 (56)

Sample Distribution by Groups and Rounds

FIGURE 1
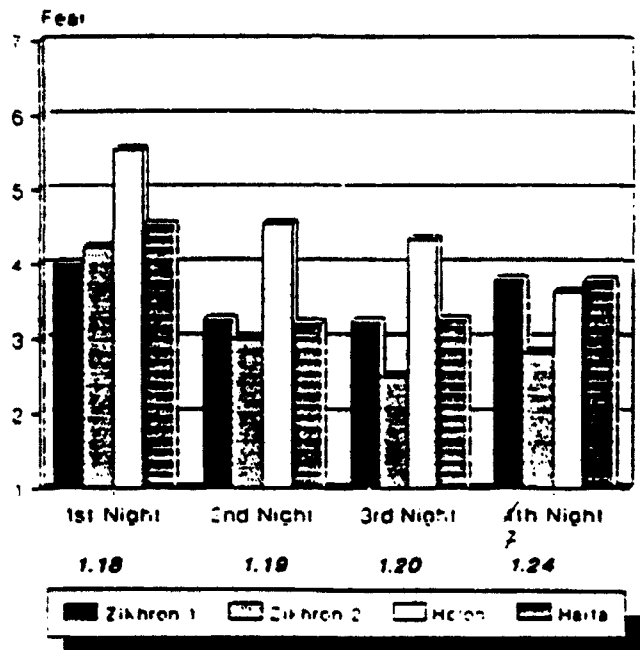
Fear Level by Night & Group During the 1st Week of the War

TABLE 2

TABLE 2

1ST ROUND

	FF	**GF**	**CHBI**	**FDA**
FF	.72	-.51	-.52	.18
GF	-.57	.31	.34	.01
CHBI	-.49	.52	.59	-.26
FDA	.00	-.07	.02	.56

2nd round (left)   1st round (right)

SECOND ROUND

Intercorrelations of the Main Variables within Each Round
and Between the Two Rounds

215

THE CLEVELAND RED CROSS COMMUNITY BASED RESPONSE
TO OPERATION DESERT STORM: AN OVERVIEW

John P. Wilson, Ph.D.
Cleveland State University
Chairman, Emergency Services
The Cleveland Chapter of the Red Cross
Cleveland, Ohio 44118

Sheryl Alexander, M.A., M.B.A.
Emergency/Disaster Services
The Cleveland Chapter of the Red Cross
Cleveland, Ohio 44118

In the fall of 1989, the United States experienced two of the worst disasters ever to hit this part of the world. Hurricane Hugo and Loma Prieta earthquake caused millions of dollars in damage to property. Fortunately, the loss of life from these two incidents was surprisingly low. Despite this fact, many people's lives were affected, because of their property losses, because of the stress and trauma they experienced as a victim of these disasters, or because they may have been participating in some aspect of the relief effort.

The American Red Cross was intimately involved during these times and provided food, clothing, shelter, and other services to those affected by the hurricane and the earthquake. Although the Greater Cleveland, Ohio, Chapter was not directly affected by these two incidents, it sent 38 paid staff and volunteers to Puerto Rico, South Carolina and San Francisco to participate in the relief efforts and to assist the disaster victims. Some of these workers did not return to the Cleveland area, and to their families, until the end of the year.

As as result of our participation, and review of our role in these disaster responses, early in 1990 the Emergency Services Department of the Greater Cleveland Chapter began to form a mental health committee. This committee met regularly on a monthly basis to address specific concerns and community needs. The participants came from a cross-section of disciplines and a variety of agencies in the community. The initial purpose of this group was to develop, write, and implement a "mental health disaster plan" that would be put into action in the event of a large scale disaster or other critical incident in the Cleveland area.

The purpose of this plan was to make certain that resources would be available to provide critical mental health service to the victims of a disaster and their families, as well as to those responding to the disaster. Agreements were to be made with a variety of providers and agencies to assure that counseling, debriefing, and other support would be in place and accessible to those in need.

A COMMUNITY BASED PROGRAM FOR OPERATION DESERT STORM

In late 1990, after the deployment of the troops to the Persian Gulf, the committee members began to focus on the needs of military personnel who would be sent to the war zone and their families who would be left alone back home. After receiving some very alarming predictions of the numbers of casualties

that were possible if the war was to be fought as predicted, the committee thought that it was imperative to involve more than just the mental health professionals who had been immersed in the planning up to this point.

An appeal was made to other professionals in the community who were not only committed to mental health services, but those who were intimately connected to the military, veterans, survivors of other wars, clergy, hospitals, the Veterans Administration Medical Center, the Vietnam Era Veteran Counseling Center, the mental health board, United Way Services, and a variety of other persons and agencies who would be needed to provide a network of support. An initial meeting was held in early January 1991 to discuss how to best provide and deliver the ongoing advocacy these families would need.

What evolved from this first meeting of approximately 50 people was a comprehensive network made up of (a) over 300 psychologists, psychiatrists, social workers, nurses, counselors; (b) over 100 priests, ministers, rabbis and other clergy; and (c) a mixture of students, corporations, private companies, attorneys, children's specialists, teachers, veterans groups and advocates, military offices, representatives from many community agencies and concerned citizens who wanted to volunteer time to help in whatever way they could. See Figure 1.

Many of these people met on a weekly basis and worked together to provide services, support groups, community stress and trauma training sessions, debriefing for staff, grief and bereavement training, 24-hour crisis support, liaison with military organizations, face-to-face counseling, coordination of information and referrals, back-up services to the overloaded Vet Center staff and clients, financial and material assistance to military families experiencing difficulties, and many other services as the need arose during this period.

Since the cease fire, the end of the initial crisis, and the return of some of the troops, the larger community based program has disbanded its weekly meetings. However, at the present time they are still working together to provide services to military families as needed. As a result of the 3 month effort at coordinated services, an extremely well-defined network and cadre of available professionals and agencies is in place should any other emergency, disaster, or critical incident occur in the Cleveland area and be within the province of responsibilities mandated by the American Red Cross.

SUMMARY

The Mental Health Committee of the Cleveland Chapter of the American Red Cross took the initiative, in the face of the impending 1991 war in the Persian Gulf (Operation Desert Storm), to develop a community based program of services to military families and to residents of greater Cleveland who were directly or indirectly affected by the war effort. Through an intense process of "networking," the Cleveland Chapter became a centralized coordinating agency with area hospitals, clergy, mental health professionals, other agencies and organizations (e.g., United Way; Salvation Army), military organizations, the Veterans Administration, local businesses, and the electronic media. Additionally, in-house service at the Cleveland Chapter included crisis hot lines, support groups for military families, an information resource center, and several training and educational programs for mental health professionals

and clergy on such topics as post-traumatic stress disorder, grief and bereavement counseling, family therapy, and more.

As a result of the coordinated inter-agency effort, over 20,000 phone calls were received and attended to and there were over 18,800 direct services to military families for the period of August 1990 to April 1991. Importantly, the spirit of volunteerism was remarkably strong with an eager willingness of the mental health professionals and clergy volunteers to assist with the multi-faceted program.

Figure 1

Military/Veterans Organizations
* Training sessions
* On-going mandated ARC communications services for all branches of service
* Family briefings prior to deployment
* Military Reservists liaison
* Special Forces Association assistance
* American Legion Posts
* VFW
* Cleveland Veterans Council

Vietnam Veterans Center
* Liaison & mental health back-up
* Support groups
* Office space or rooms for groups if needed

VA Medical Center
* VA/DOD contingency plan
* Family information officer at VA
* Volunteer counselors/ support personnel

Veterans Administration
* Support/office space for misc. projects

Civilian Hospitals
* Psychiatric referrals & available beds

Clergy: Volunteers & Services
Pastoral Counseling
Crisis Counseling
* Catholic Diocese
* Inter Church Council
* Gr. Cleveland Baptist Association
* Salvation Army
* Rabbinical Plenum

Greater Cleveland Chapter AMERICAN RED CROSS
Operation Desert Storm Support for Services to Military Families & Veterans

In-house activities:
* Community information hotline 431-3242 regarding community services/groups/ military information
* Mandated Red Cross military emergency communication network
* Four support groups
* In-house staff training
* In-house staff de-briefing
* Community stress & trauma conferences
* Community training sessions
* Coordinate mental health referrals
* Coordinate clergy referrals
* Coordinate community support groups
* Networking with other organizations to determine available programs/services
* Vietnam Vet center backup
* Media liaison/information

Corporations/Associations
* Donation of goods & services
* Co-operative efforts to assist military families
* Training for staff groups
* Cuyahoga County Bar Assoc. free legal services for military families

Area Schools/Universities
* Training & education sessions
* Student volunteers for hotline counseling

Interfacing with Other Community Agencies
(for coordination of services, support, & training)
* United Way Services
* Salvation Army
* Jewish Family Services
* U.S.O.
* Hispanic Community Forum
* Neighborhood Centers Assoc.
* Catholic Social Services
* Lakewood Christian Center (Arabic families)
* Child Guidance Center
* Cleveland Free Clinic

Professional Mental Health Volunteer.
* Referral list
* Family counseling
* Children's counseling
* Individual counseling
* On-call backup/crisis situations
* Grief & bereavement training
* On-going training
* De-briefings
* Mental health board support
-- Cuyahoga County
-- Geauga County

USA GIVE: A VOLUNTEER EFFORT TO ASSIST
AMERICAN HOSTAGES IN IRAQ

Leslie H. Kern, Ph.D.
USA GIVE
Columbus, Ohio

On August 9th, 1990, one week after Saddam Hussein marched into Kuwait, there were approximately 3,500 Americans remaining in Iraq and occupied Kuwait. By the end of August, approximately 100 of them had been rounded up and were formally identified by the Bush administration as hostages. These 100 Americans were being held as prisoners in Baghdad hotels or used as human shields at various military and industrial sites throughout Iraq. The remaining 3,400 Americans were living in hiding because they feared that they, too, might be taken as hostages if their whereabouts were to become known to Iraqi authorities. The vast majority of these individuals were unable to communicate with relatives in the U.S. out of fear that attempts to communicate would result in their capture.

There were, therefore, two American populations subjected to severe emotional stress as a result of the crisis in the Middle East: (1) the 3,500 Americans in detention, and (2) the tens of thousands of family members who remained in the U.S. with little or no information regarding the circumstances of their endangered husbands, wives, parents, sons, daughters, and lovers.

USA GIVE was formed in response to the perceived psychological needs of these two populations. Although it was based in, and organized from, Columbus, Ohio, USA GIVE provided returning hostages/refugees and their families access to pro bono psychological services in the various cities where they were located throughout the country. The organization began as the response of one individual and grew rapidly as she was joined by dozens of others.

The first clients assisted by USA GIVE were waiting family members. Their needs included anxiety relief, information about how to deal with the press, reassurance about the normalcy of their emotional responses, and a place to ventilate feelings of anger, helplessness, and fear. These clients were referred to psychologists listed in the National Register of Health Care Providers in Psychology.

This part of the network was coordinated by support staff in Columbus, Ohio, which included 12 psychologist volunteers, nine of whom worked during the day and three of whom were available to respond to night calls by means of a paging system.

The procedure for linking client and therapist worked as follows:

1. Incoming clients contacted USA GIVE toll free from anywhere in the country by calling 1-800-USA-GIVE;

2. The caller was put in immediate contact with a screening psychologist by means of a 24-hour answering service combined with a paging system;

3. The Columbus psychologist assessed the needs of the incoming client or family by telephone; and

4. A contact was made with a psychologist in the geographic area where the client was living and who agreed to work with the client on a pro bono basis.

Organization and financial support of this initial effort was made possible by generous donations of phone service by AT&T and US Sprint.

The second group of clients assisted by the effort came soon after the first. These were women and children released after a few days to several weeks of captivity. They were traumatized mostly by fear, but some had been raped. Not only had they been traumatized by their experience in captivity but they now faced being single parents. Many were financially destitute. Some were confronting culture shock.

The children of these women, held with them in captivity, experienced symptoms of developmental regression, exaggerated startle response, separation anxiety, oppositional behavior, poor school adjustment, nightmares, and incontinence.

Because this second group of clients was actually experiencing symptoms of post-traumatic stress disorder (PTSD), it was felt that they should be referred, whenever possible, to therapists trained for, and experienced in the treatment of post traumatic stress. Thus, an advisory panel of eminent experts in post traumatic stress was formed. This panel was drawn from throughout the country and met on a weekly basis by means of conference calls. The panel consisted of Drs. Jack Lindey, Frank Ochberg, Charles Figley, Arthur Bland, Frederick Gussman, Charles Marmar, Edwin Parson, John Wilson, John Stein, and Bessel Vanderkolk.

By means of the conference calls, this advisory board put together a network of "triage experts" located throughout the U.S., who handled the referral of this traumatized population to appropriately trained therapists. Triage experts were individuals who members of the advisory board knew personally. When a traumatic stress client contacted USA GIVE, the call was immediately referred to the triage expert geographically nearest the client. It was generally possible for that liaison expert, using the network of his or her professional colleagues, to locate a therapist experienced in the treatment of traumatic stress in the client's home community. Triage experts were located in Baltimore, Denver, Chicago, Seattle, Boston, Okemos (Michigan), Tallahassee, and Los Angeles.

The third group of clients who received assistance were returning hostages and human shields, persons who had been held at hotels and strategic sites in Iraq. Although these clients were not generally tortured or beaten, they did often have access to the BBC and the Voice of America, so they were well aware of their plight. These clients were in some cases somewhat nutritionally deprived, and those with chronic treatable disease had often gone without vital medications for weeks to months.

These clients were also referred using the PTSD network described above.

Throughout the development of this effort, one of the most formidable tasks was to get the word of our existence out to potential clients. This was accomplished through the local and national media, which took a strong interest

221

in the project. The State Department, using a pamphlet compiled by the National Organization of Victim Assistance in Washington, D.C., endorsed the project at its inception and sent letters to all affected families informing them of our availability.

In all, 109 individuals were placed in treatment with 87 therapists (a number of people were seen as couple or families). In addition, USA GIVE answered 1,453 calls requesting information of some kind from the affected population (e.g., how to obtain assistance from the Red Cross, how to contact the Kuwaiti Embassy, where to obtain legal advice on a mortgage foreclosure. etc.). Literally hundreds of diverse questions were answered in this way in addition to the provisions of mental health services offered through the organization.

The organization officially completed its mission on April 1, 1991, approximately 4 months after the release of the last American hostage from Iraq.

Fortunately, the composition of the advisory board is such that the organization can be reconstituted and made active again in the event of a similar disaster in the future.

COMBAT, CHAOS, AND THE HUMAN SPIRIT:
THE ROLES OF RITUAL AND CEREMONY AS HEALING TOOLS

Jon Perez, Ph.D.
The LifePLUS Foundation
North Hollywood, California

"It is a good day to die." Ancient Lakota (Sioux) saying

The quote above has been claimed in various forms by many peoples and cultures. I chose the saying of the Lakota people as they are close to my personal roots as a Native American, and it was common ritual for Lakota warriors to speak the phrase before combat. It represents not a fatalistic resignation to death, but rather a statement that connected and stabilized the warriors before the onslaught. It was a recognition of the stakes of war. By acknowledging--rather than accepting--this ultimate possibility, the warriors steeled themselves for what they might encounter. In the face of death they sought control. They offered themselves up, rather than being taken. Often overlooked in the literature on, and treatment of, traumatic reactions is this critical point: trauma, de facto, rips away a person's control to maintain stability--and safety. It is this point, I believe, upon which much of the traumatic symptomotology rests, and where understanding and treatment should begin.

The presentation in San Antonio, which originally was to be an overview of more pragmatic methods of psychological intervention for trauma victims, evolved into an animated theoretical discussion of ritual and ceremony as it related to Native American warriors and modern day military forces. What was ancient became contemporary. As a result of that interest, this paper will focus on the issues touched upon in that discussion. It will explore theory more than practice, illuminate underlying issues to be aware of, and hopefully provide a framework from which more coherent understanding of and treatment for traumatic reactions can be developed. For those who wish an overview of actual intervention strategies and techniques, please contact me and I will forward that information.

Trauma is a word often used to describe psychological reactions to cataclysmic events--floods, fires, wars, hurricanes, and other momentous upheavals. Important to this discussion is the underlying connection between external upheaval (the event) and the internal response to it (the "traumatic" reaction). Prevalent in the literature on stress and related studies is how the individual internally reacts to and defends against stressors. However, it is also important to explore those external mechanisms groups of individuals have developed and used to maintain stability in stressful/traumatic situations. Particularly for those of us engaged in the study and treatment of victims in large scale disasters, these external controls can be critical to inoculate those facing traumatic events as well as heal those who have fallen victim to them.

For the discussion here I will focus on only three foundations of stabilization: (a) control, (b) belief, and (c) ritual. There are obviously many others, but for the limited space available these appear to be the most compelling supports upon which the other aspects build. Also, while these represent internal processes, the focus here will be on their external manifestations and how they can fortify the internal ones.

As previously stated, control is the critical foundation of our psychological health in the face of danger. If internal control of personal action and influence is maintained, stability will be maintained, even in the face of severe external threat. Also, prognosis for recovery is markedly increased. Studies of POWs, hostages, and others who have faced severe external threats continually validate the relationship between control and mental/emotional stability. For our discussion, control is the goal, belief and ritual are important means of maintaining and/or fortifying that control.

In this context, belief refers to what we hold to be true about the world and ourselves in a psychological/emotional way. It is perhaps the most controversial and difficult aspect of this discussion to define and support, as it touches upon psychological issues as well as questions of philosophy, faith, and truth (probably with a capital "T"). Although these are difficult concepts to operationalize, their influence on internal stability is generally recognized. This is particularly true when there is external threat. The old adage that there are no atheists in combat is the popular expression of the power of belief and belief systems in such situations.

Ritual refers to the ways in which individuals seek to normalize their worlds. Through ritual behavior predictability, continuity, and control are sought. Ritual (and the resultant routines) helps us ground and anchor ourselves. We all have our own rituals in daily living, most of which we do not even think about until there is a change in them—which attests to their importance and effectiveness. With minor disruptions, we know something isn't quite right; with major disruptions, as in a traumatic event, we can feel our whole world being torn apart.

To bring these various themes together in a real world context, let me describe some of my experiences working with care delivery systems in, and victims of, the Loma Prieta earthquake which hit central California in 1989. It was as a result of this work that I formally incorporated the above criteria into our current intervention model.

Fear and excitement were blended together when I flew into San Francisco 48 hours after the earthquake. What I had heard from those who requested aid from us was chilling. Thousands of people were directly affected, physically, materially, and emotionally. What I had seen on television was total devastation: fires; broken buildings; the Nimitz freeway collapsed; rescue workers desperately combing wreckage; and stunned, defeated faces staring blankly at nothing. My flight into SFO was one of the first after the flightline had been reopened. All of this combined, frankly, to scare me rather viscerally. My mind conjured up worst case scenarios: multiple psychological casualties and no available treatment, buildings falling, bedlam and mayhem everywhere, I was afraid I would be able to do nothing except get in the way. I was succumbing internally to what I believed was the external situation. My own internal balance was thrown off, and I fell victim to my increasingly morbid ruminations. External "reality" became my internal reality.

It was not until I actually toured some of the areas and got down to work with the emergency services personnel later that day that I regained my internal balance. There were systems in place and people were working, there was chaos, but no bedlam. My external reality was changed and my internal one

followed. In the days and weeks of work that followed, I was continually struck by this connection. As various treatment modalities were tried it became clear that the most effective took into account the need to balance and stabilize in the face of tragedy or the unknown. Information and education (externals) became critical for internal resolution. Also, as the work continued, more systems were put in place and more external structures were secured (ritual), and increasing regularity was achieved (control). The effect on the victims was direct and clear--they began the healing process.

Much of my direct patient care following the earthquake was with the large Native American community in the Bay Area. The people I saw helped me understand traumatic events at the individual level and how to intervene in them in a way I never had before. Their critical contribution was their ability to have me feel the power of ritual and belief in the healing process. It became clear that various spiritual and social ceremonials were targeted directly at helping individuals maintain internal order and balance. The extent to which these ceremonials and their underlying spiritual significance were believed indicated the extent to which they aided in an individual's healing process. It was during one of these ceremonies that it finally struck me how similar the underlying processes were between what the ceremony was trying to accomplish for those present and what the systems level interventions were trying to accomplish elsewhere.

Bringing this full circle to San Antonio, prior to my presentation I had, for some unknown reason, separated Indian ritual and belief systems from military ones. When one of the audience commented that the military was full of ritual and ceremony I was struck, yet again, by the underlying congruence. I remembered my own military experience and thought how inconceivable it would have been to not call morning formation at exactly 0730 daily (the only exception being during a mission), or to not salute an officer, or to not clean weapons following firing, or even to not yell at the unit boneheads when they invariably screwed up. Of course these were rituals and, for military personnel, they were sacred. They were the instruments of stability and control. God, country, comradeship, and rightness of cause, among others, were the beliefs.

So, how is all this related to extending the knowledge base for military psychology? Very directly and simply, most modern day military forces do not have rituals for emotionally preparing troops for combat, nor do they have rituals for healing them once they return. I believe it is critical that such rituals be devised and become SOP. The Gulf War demonstrated how effective allied forces are at accomplishing their primary mission. It also demonstrated how spotty and haphazard is the handling of psychological issues. And, we were more effective in this regard than in any prior conflict.

What I advocate is formalized direct psychological/spiritual indoctrination of troops prior to actual combat. Tap their belief systems, educate them about the changes we know will occur in them and about how to stabilize them. Give them a sense of order and personal control in the face of combat. Congruently, also give them a psychological/spiritual ritualized homecoming. As they secure their weapons and equipment, they must also understand the need to secure their combat mentalities. They must be brought back into the safety and security of home. Then, too, they will need to be educated about the changes we know will occur there and how to stabilize them

as well. Native Americans knew the value of such processes, and we merely forgot them somewhere along the way.

In closing, I urge that these rituals, whatever shape they may take, become doctrine. Remove the stigma of "psychology" from them as much as possible and make them as normal and expected as morning formation. I firmly believe they will be effective and, with time, become highly valued aspects of military structure.

I am not sure anyone who has not faced the spectre of combat can appreciate the full meaning of the Lakota saying that it is a good day to die, nor that they will not misconstrue it as fatalistic or barbaric. However, for those whose mission it is to engage in combat, or to treat those who do, its message is clear and unmistakable. I ask that the sentiments and processes that the statement represents, if not the actual words themselves, not be forgotten when we seek to understand the effects of combat and develop methods and means to heal those who must experience it.

JOB STRESS AND POST-TRAUMATIC STRESS DISORDER:
AN ORGANIZATIONAL PERSPECTIVE

Mark Braverman, Ph.D.
President, Crisis Management Group, Inc.
Watertown, Massachusetts

Co-chair, Task Force on Work-related Trauma
International Society for Traumatic Stress Studies

HEALTH AND THE WORKPLACE

The workplace has become a prime focus for the study of preventive health. For over 20 years, research in a number of fields including medicine, mental health, social psychology, sociology, the law, and public policy has been brought to bear on this issue. This activity has accelerated in recent years, driven by economic realities. Losses due to sickness and the rising cost of providing health care protection to workers are among the fastest growing costs to businesses. Costs in lost worker time, health insurance and workers compensation are increasing exponentially due to a marked increase in the frequency of psychological stress claims. Claims of job-related mental injury rose from 5% of all occupational disease claims in 1980 to nearly 15% in 1987. Companies have attempted to combat these rising costs by creating self insured systems and pools, finding ways to lower the cost of health care through HMOs and other forms of managed care, and working to change the laws governing workers compensation. While costs related to worker health increase, economic realities also exert pressure on companies. Downsizing has become a fact of life for companies who want to remain competitive. For the military, cutbacks force units to do more with fewer personnel. Companies in the public and private sectors alike must find ways to increase the productivity of personnel by improving their hardiness to stress and general health and reducing drug and alcohol abuse, smoking, and other health risk factors.

THE HUMAN RESPONSE TO STRESS

The question of how to promote health and prevent disease has occupied the scientific world since early in this century. Indeed, these explorations have invoked centuries-old philosophical debates about the nature of man's relationship to his environment.

Early Work on Human Stress

The modern field of occupational stress owes much conceptually to the work of Cannon and Selye earlier in this century. In his theory of the human stress response, Cannon described an automatic, adaptive physiological response to stress. Under conditions of overwhelming or uninterrupted stress, this response could lead to health problems. In the thirties, Selye described a syndrome which could produce significant effects on general health and immune response as a response to stress.

Psychological Theories of Stress

More recently, Lazarus and his group observed that not only the environmental stress itself but the way it was perceived could induce stress. The work of him and others placed the study of stress within a psychological framework. This tradition, along with psychoanalysis, provided the foundation

227

for the work on traumatic stress of the last 20 years. In the interim, however, much of the attention to human stress occurred within the field of occupational stress.

STUDIES OF OCCUPATIONAL STRESS

Caplan and French's work at the University of Michigan informed much of the subsequent work in job stress. They investigated how job conditions could cause stress-related health problems and identified several classes of job stressors which in turn resulted in physical health problems such as cardiovascular disease. Established in 1971, the National Institute of Occupational Safety & Health (NIOSH) carried this work forward, elaborating on the Michigan model. NIOSH researchers explored how personality variables and some qualities in the work environment could act as buffers to stress. Other researchers in the psychological and sociological tradition explored how personality variables could produce stress resistance and enhanced coping.

THE CONVERGENCE OF STRESS STUDIES AND PSYCHOLOGY

Thus, several traditions converge on the issue of job stress. Early stress studies asked how environmental conditions effect peoples' health and ability to work. Psychology looked beyond the objective qualities in the stressor itself to qualities in the individual that affected the stress response. In a clinical context, this introduces concepts such as "vulnerability" and individual risk factors. Traumatic stress theory, for example, has considered the role of a history of trauma in the conditioning of a stress reaction. Allowing personal qualities into the stress equation also introduces the concept of coping. The person is no longer passive but can shape his response, change his behavior in order to adapt to changing or unexpected events. Ultimately, she or he can make meaning from the experience.

PSYCHOLOGICAL TRAUMA THEORY

Studies in psychological trauma are at the crux of this issue. Trauma theory, taking Freud and stress theory as its starting point, assumes that we have the ability to maintain homeostasis in the face of our everyday experience and within a range of normally stressful events. Trauma theory also emphasizes the role of cognition in the integration of expectable demands and stressors: what is the meaning of the experience; how does it impact on our system of expectations about the world? How one grapples with the traumatic experience in terms of one's relationship to other people and one's own values is an important part of the trauma response. This dimension of the response also conditions the outcome of trauma: a second injury can occur when the meaning of the experience is not validated by others, and there is an absence of understanding and support to deal with emotional needs.

An ongoing issue in research in traumatic stress has been to understand the relationship between the sources that contribute to the development of traumatic stress reactions. How we understand the relationship between these factors has important implications for how we treat our patients; how we design our research; how we design our work environments and treat our employees; how we deal with injured workers in our workers compensation and health benefits systems; and how we prepare our soldiers for war and help them manage their reactions to combat.

228

These issues have been the focus of discussion and even debate for some time. If we believe that the qualities in the environment produce stress, then we go about changing or manipulating those conditions. If the focus is on qualities in the individual that foster vulnerability or, alternatively, help him or her resist stress, then we prepare the person or help him or her deal with the exposure. Often, however, this discussion overlooks the interaction between these factors. What factors in the environment can promote the ability of individuals to cope with or resist the effects of traumatic stress? The concept of organizational culture is useful in this regard. Culture is defined as the collective values, ideas, and beliefs shared by members of a work organization. Under conditions of stress, these values are highlighted in the behavior of the group and its leadership.

The concept of "organizational culture" was adopted enthusiastically in the early 1980s by Organizational Development practitioners, who had become disillusioned by the technical solutions to performance problems that had dominated their field. Communication of shared values and finding a common language replaced technology and "human engineering" as the way to boost performance and increase productivity. The concept of culture could further be used as a tool to frame the organizational mission: "we love to fly and it shows;" "quality is job one;" "people are our most important product." This produced a reaction from parts of the organizational development and organizational psychology community, who saw the concept of culture converted into a tool of management to control and manipulate workers. Writers also critiqued the tendency to oversimplify, particularly in the assumption that company cultures were homogeneous. In fact, recognizing and valuing differences among people has become a prime tool for team building and communication organizational settings.

COMMUNICATION AND CONTROL

Making critical information available in times of crisis is paramount. In a crisis, information confers control; but more than information is conveyed in the process of this communication. When leadership takes it upon itself to communicate to the group in a crisis, it conveys caring, the importance of the group itself. This in turn conveys a form of control, that has implications for the recovery of the group itself.

The response of a workgroup to the traumatic stressor resembles the individual response to trauma. It will consist of either a "passive" response, resembling the decline in functioning and health of the helpless victim of violence or abuse, or an active response characterized by the learning of new skills, a heightened sense of group identity and group self-esteem, and the mobilization of high levels of social support. The ability to mobilize these resources is directly related to the ability of management to share information about the crisis with employees and to the employees access to information about traumatic stress. The classic "victim" position involves no access to information or other sources of control over one's situation. In a group trauma situation, lack of information increases the risk of post-traumatic stress symptoms and social isolation.

THE LINK TO PSYCHOLOGICAL TRAUMA THEORY

Trauma theory provides a model for, and an understanding of how groups respond in a crisis. Think of the individual as an organism with a membrane that protects it from the outside, but that also encloses a system of beliefs, expectations, and schemas. The traumatic stressor represents an unassimilatable stimulus. The initial response to trauma is to deny, reject, or dissociate the experience. "Numbing" and "sealing over" are terms used to describe the subjective or psychological experience of this rejection or dissociation of the experience. What we think works to prevent PTSD is to facilitate the integration of the hitherto threatening or non acceptable event. This requires favorable environmental conditions: social support, validation and education, and titration of stimulation. But it also calls on internal resources—resources within the individual that allow him or her to make necessary and often painful adjustments and changes that lead to integration and recovery.

A similar process happens in groups. The group has inherent restorative and health promoting qualities. These have to do with how, or whether, the group sees itself as a group at all, and how it defines itself as a collective. Are individuals valued as unique and valuable in their own right? Is there possibility for communication and sharing between employees in groups as well as across management-employee lines? Does the organization genuinely value people in their jobs rather than people as their jobs? Does it demonstrate through rituals, programs, and events that human needs are paramount in the pursuit of the organizational mission? These values are expressed in various ways. They appear in structures for communication about work and working conditions. They are expressed in the provision of adequate health benefits and Employee Assistance Programs. They are seen in health-promoting benefits like flex shifts for parents, maternity and paternity leaves, smoking cessation and alcohol and drug education programs, stress reduction programs, and crisis intervention programs.

THE CHALLENGE FOR THE WORKPLACE: THE EXAMPLE OF THE RESERVES

As society experiences changing economic realities and the social realities in their wake, the workplace will continue to feel the impact. The line between so called "critical" situations and ongoing stressors will increasingly blur. As families face drastic changes in their economic well-being, the military, along with the private sector, must take increasing responsibility for the health of workers. For example, urban transit workers are experiencing rapidly escalating stress as a result of urban violence as on the job assaults increase. These companies are struggling with the sudden increase in stress and disability claims from these assaults. For the military, changes brought by reductions in force, new technology, changing family patterns, and an increase in the use of reserves require a serious look at this issue.

Returning reservists face particular problems in readjustment to their working lives. The experience of Desert Storm showed that while literature and training from a family perspective exists to help soldiers re-enter civilian life, they nonetheless experienced considerable stress in relationships with superiors and coworkers back at work. Some returning reservists had difficulty resuming their pre-combat work lives because of how the war had affected them emotionally. In other cases, reservists felt alienated from and mistrustful of

coworkers who did not understand their experience in the war or did not know how to relate to returning military personnel. In the case of several units in New England, post-combat stress manifested in employment readjustment difficulties that were more severe than the more expected family issues. We found no literature, training, or services to confront this problem. Alongside the private sector, the military workplace will assume a more important role in preventive health for reserves and enlisted personnel alike. There is a critical need for new methodologies in stress and health assessment, health promotion, and program evaluation.

These problem areas require strategies for prevention and intervention through group and individual counseling and procedures for handling treatment and return to work. For reserves, part of the solution lies in education in the workplace setting itself, on post-service adjustment, and basic military stress issues. For the returning units, there should be training and consultation available for returning units as well as for employers and coworkers. Educational and training materials on the model of existing family readjustment materials should be developed focusing on workplace adjustment.